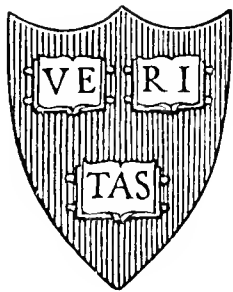




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ATKINS INSTITUTION OF THE ARNOLD ARBORETUM, SOLEDAD, SANTA CLARA, CUBA

Memoirs of the Nuttall Ornithological Club

No. IX

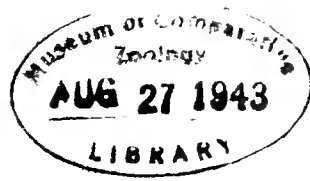
CUBAN ORNITHOLOGY

By THOMAS BARBOUR

WITH TWO PLATES

CAMBRIDGE, MASSACHUSETTS
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INTRODUCTION

THE BIRDS OF CUBA, which I wrote in 1923, is almost out of print and, at the request of Mr. Charles F. Batchelder and others of my friends, I have been asked to prepare a new book. Returns from banded birds have provided a lot of new information, and other circumstances have developed that have made it worth while practically to prepare a new manuscript. Naturally, the one portion of the old book which called for no changes was the introductory matter dealing with certain general considerations such as the geological history of Cuba, climate, the history of ornithology in Cuba down to 1923, and other matter of a general nature. This has been omitted. While I like the illustrations in the old book, I have decided to substitute two scenes, scenes I may say of surpassing loveliness, taken by a photographer of the Cuban Department of Public Works in the Garden of Soledad, which I mention so often. I think, for the convenience of librarians, it is just as well to consider this a new book, so I have changed the title.

Much water has run over the dam since 1915 and the development of the study of natural history in Cuba has rushed forward apace. This is largely due to the fact that a generation of extraordinarily talented young naturalists has appeared on the scene; not that there have not been talented native naturalists in Cuba before, but there have never been so many so nearly of an age. This is the result of the influence of two great teachers: Brother Leon of the De la Salle Institute in botany and Doctor Carlos de la Torre at the National University in zoölogy. I suspect that these two scholars of world-wide reputation, in their heart of hearts, agree with me that the esteem in which they are certain to be held in the future will be based as largely upon the appreciation of the young men whom they have induced to enter the study of the natural sciences as on the astonishing number of new plants or new animals which have been introduced to the scientific world.

Doctor Luis Howell Rivero is an accomplished ichthyologist; Doctor Guillermo Aguayo is particularly interested in marine zoölogy; Doctor Abelardo Moreno in entomology, Doctor Pedro Bermúdez in micropalaeontology and Dr. Isabel Perez Farfante de Canet in carcinology. All of these young

people have been pioneers and greatly helpful in securing conservation legislation. My old friend Doctor Lainé, many years ago, began agitating for bag-limits and a more limited shooting season, but his was a voice crying in the wilderness. Now, however, real progress has been made, and in a document recently received from the Pan-American Union, May, 1942, entitled "Convention and Documentary Material on Nature Protection and Wildlife Preservation in the Western Hemisphere," I glean that a number of species have been granted protection at all times of the year and that all other native birds can only be shot or captured to be held in captivity or killed for sport or scientific purposes under certain definite restriction. The following have complete protection:

"Mycteria americana ¹	Limosa haemastica
Ajaia ajaja	Crocethia alba
Catoptrophorus semipalmatus	Pisobia melanotos
Totanus flavipes	Tringa solitaria solitaria
Actitis macularia	Rallus limicola
Phaeopus hudsonicus	Laterallus jamaicensis
Numenius americanus	Porzana carolina
Totanus melanoleucus	Porzana flaviventer gossei
Pisobia fuscicollis	Grus canadensis nesiotis
Limnodromus griseus scolopaceus	Phoenicopterus ruber
Micropalama himantopus	Oreopeleia chrysis
Ereunetes pusillus	Oreopeleia montana
Ereunetes maurii	Oreopeleia caniceps caniceps
Tryngites subruficollis	Aratinga euops
Limosa fedoa	Amazona leucocephala"

Also, one notes with pleasure that the north and south coasts of the Provinces of Santa Clara and Camagüey have been designated as a National Refuge for flamingoes and that the Ciénaga de Zapata from the Hatiguanico River to the Bay of Cienfuegos has been declared a National Refuge for Fish and Game; that the Mayarí area inland from Sagua de Tánamo has been set up as a National Park, and also the region of Topes de Collantes in the Province of Santa Clara, whereas a considerable area in the central portion of Havana Province has been named The Gundlach National Refuge for Fish and Game. One is proud to record these measures and one hopes not only that the ex-

¹ This list is the form in which the information has been published.

ample may be followed in other Latin American countries, but that real protection may be enforced for these areas in Cuba.

The most noteworthy event in Cuban ornithology during the years since my first book on Cuban birds appeared was the decision of James Bond of Philadelphia to devote himself to the study of the birds of the West Indies. A peerless observer and a person possessed of great charm of manner, he naturally made himself welcome far and wide. Feeling that less collecting and more observing of birds was the need of Antillean ornithology, he devoted himself in a leisurely way to studying the abundance, breeding habits and distribution of the birds of the Antilles, so that now he may rest sure of the knowledge that no one has ever lived who has seen as many Antillean birds as he has, or seen them as intimately.

The first results of his ornithological survey of the Islands, which began in 1926, appeared ten years later in his 'Birds of the West Indies,' published by the Academy of Natural Sciences in Philadelphia. Here are accurate descriptions, many figures and an extremely interesting and illuminating introduction. Four years later, however, he published the mature results of his many journeys, an even more scholarly and convincing piece of work. His 'Checklist of the Birds of the West Indies,' published by the Academy in Philadelphia, in 1940, is indeed a most creditable production.

I have leaned heavily on this book in making up my mind concerning nomenclature, but I have not felt inclined to follow Bond invariably, and I do not always see quite eye to eye with him with regard to the recognition of subspecies; nevertheless, generally speaking, I have followed him closely and it would ill become me not to make frank and grateful recognition of the way in which my task has been facilitated through the accuracy and excellence of what he has written.

I have spoken elsewhere of the activity of the younger group of Cuban naturalists. I can only repeat here how much I value their friendship and how much I appreciate the assistance and information which they have given me.

The 'Memorias' of the Poey Society of Natural History, a series of publications which would be a credit to any scientific organization, have recorded a number of birds new to the fauna of Cuba, erratic visitors, but none the less interesting.

Along another line I should like to mention the work of Doctor David E. Davis. I was in close touch with Doctor Davis during the course of his studies, since he took his doctor's degree at Harvard and did his work at Soledad. The results of his sociological studies of the Ani population at the Garden there are referred to in my section concerning the Ani in the body of this book.

Just at the moment of writing a new paper of his has been brought to my attention. It is entitled 'A New Census Method Applied to Cuban Birds.' ('Ecology,' vol. 23, no. 3, July, 1942, pp. 370-376.) This paper gives an interesting résumé of the reliability of a sampling-census method depending upon two assumptions: (1) that the area chosen is a representative one, and (2) that the technique of counting does not influence the count.

In 1936 my brother-in-law, Doctor James L. Huntington, and I were at Soledad for a few weeks after the most devastating hurricane, indeed the only first-class hurricane, which has visited that part of the Island for some fifty years. The fact that the Trinidad Mountain Range lies to the southeast and quite near the Garden area has given it great protection, for the hurricanes usually come from the southeast or east and, hitting the mountain ridge, the disturbance is deflected so that the storm passes upward and over, leaving the Garden area in relative calm. This storm, however, played havoc, not only with our trees but with the birds, and we published in the 'Auk' (vol. 53, 1936, pp. 436-7) a short summary indicating the reduction of the population due to the storm.

A full and complete account of the dates of arrival and departure of migrants in Cuba has been prepared in the painstaking accuracy of Doctor S. C. Bruner. This was published in three parts in the Memoirs of the Poey Society of Natural History (vol. 12, no. 3, July, 1938, and no. 5, December, 1938, and vol. 13, no. 1, February, 1939).

In Davis's 'Notes on Cuban Birds,' ('The Wilson Bulletin,' vol. 53, no. 1, March, 1941,) a number of observations on nesting and habits are well set forth.

In conclusion I may say a few words concerning my own visits to Cuba. I have gone to the Garden every year, with the exception of 1942, usually for a few weeks in February, March or April, sometimes for a longer period of time, and I have made occasional visits in summertime as well. The way the birds in the Garden have reacted to protection is very satisfying, and in the pages which follow I have indicated the birds that the casual visitor may expect to see there. Casual visitors are increasing (up to the time of the outbreak of war), since now, at long last, there is a good motor road from Havana via Esperanza and Cienfuegos to Soledad. For many years the rocky bit of woods which we call the Seboruco was allowed to grow up to a tangled mass of grass, shrubs and vines, topped with trees, and I must confess it was a better refuge for birds in that condition than it has been since we decided to eliminate

all of the fortuitously introduced stray plants and weeds and preserve the area as a reserve for Cuban native hardwood trees. This involved an enormous amount of 'clearing out,' with the result that there are perhaps fewer birds, but the by no means inconsiderable number of native species which continue to resort to the area are readily observed and are, moreover, to be observed in a setting of extreme beauty. Daydreaming, as is my wont, I often find myself sitting on a buttress of a giant ceiba tree in a little dell where a crystal stream winds its way through a narrow gorge in the white limestone cliffs, rocks overgrown with lovely aroids and beset with ferns, topped over with giant shady trees which are laden with bromeliads. Here we have made an exception to our rule and concentrated all our exotic orchids on the tree-trunks where the air is moistened by this little stream, our native orchids being segregated elsewhere, and if there is a more entrancing resting place after a warmish walk I have yet to find it.

ANNOTATED LIST
OF THE
BIRDS OF CUBA

1. **Colymbus dominicus dominicus** Linné

ANTILLEAN GREBE; SARAMAGULLÓN CHICO

A Grebe similar in appearance to the Northern Pied-billed Grebe, but decidedly smaller.

Cuba, being largely a limestone country with underground drainage, has very few lakes and ponds. Places suitable for nesting Grebes are not often seen. This bird is decidedly uncommon, probably not more so today than formerly. I have seen it in small ponds generally in Pinar del Río, and less often elsewhere.

2. **Podilymbus podiceps podiceps** (Linné)

PIED-BILLED GREBE

The larger birds found in winter in Cuba and Central America represent this race.

3. **Podilymbus podiceps antillarum** Bangs

PIED-BILLED GREBE; SARAMAGULLÓN

The Pied-billed Grebe is a somewhat rare bird, but more often seen than the preceding. In Lake Ariguanabo and Lake Bacuranao there are always a few pairs, as well as in the lakes of the great Ciénaga de Zapata. Elsewhere

there are only scattered birds in the little ponds. The Grebes do not seem to adapt themselves to the 'bonnet beds' and dense fields of water hyacinth and lettuce, the way the Masked and Ruddy Ducks have done. They apparently prefer open water. While I was at Lake Ariguanabo with Lord William Percy in January, 1920, we saw several downy young. Gundlach called attention to the fact that Grebes in Cuba nest at very various times. Bond believes that this is the Grebe of Central America from central Mexico south to El Salvador.

4. *Oceanites oceanicus* (Kuhl)

WILSON'S PETREL; PAMPERO

Gundlach saw some Petrels, which he fed in the wake of a schooner with cut bits of dolphin (*Coryphaena*). He fails, however, to say how near the Cuban coast these birds really were. I never have seen any Petrels on my very many journeys about the coast or between Florida and Havana. So far I have looked in vain for the Black-capped Petrel, observed by several naturalists recently in waters not far from the Florida Strait.

5. *Puffinus lherminieri lherminieri* Lesson

AUDUBON'S SHEARWATER; PAMPERO

There is no evidence that Audubon's Shearwater breeds about the Cuban coast, as it does in the Bahamas. It is often seen off shore, and frequently has been found inland after hurricanes.

6. *Puffinus griseus* (Gmelin)

SOOTY SHEARWATER

Aguayo and Moreno ('Mem. Soc. Cubana Hist. Nat. F. Poey,' vol. 13, no. 5, Dec., 1939, pp. 315-317) record that two specimens of this bird were shot at Matanzas, one in July, 1936, and the other in November, 1939.

7. ***Phaethon lepturus catesbyi*** Brandt

TROPIC-BIRD; RABIJUNCO

In 1913 I visited Cabo Cruz, and found the breeding colony of this species which Gundlach recorded still in existence. It appears to be the only one in Cuba. In the spring of 1922, while sailing past the Farallones de Maisí, I observed a single pair flying toward the shore.

8. ***Sula leucogastra leucogastra*** (Boddaert)

BOOBY; PÁJARO BOBO

A few Boobies nested formerly, according to Gundlach, on Cayo Mono Grande. I have seen none about Cárdenas recently. There is, however, a large nesting colony on Cayo Piedras, in the Ensenada de Cochinos, where Brooks and I secured several specimens on our visit to Caleta Rosario on the Ensenada.

9. ***Sula sula sula*** (Linné)

WHITE BOOBY; PÁJARO BOBO

I have but seldom seen White Boobies off the Cuban coast. Gundlach apparently saw them too often to cause much comment. He never secured specimens except once after a cyclone, when some were blown inland to Camarioca.

10. ***Phalacrocorax auritus floridanus*** (Audubon)

FLORIDA CORMORANT; CORÚA

This is the Cormorant that sits on every buoy about the Cuban coast. It is the most characteristic water bird seen on coasting trips among the cays

or from Batabanó to Nueva Gerona in the Isle of Pines. The nests are almost always in the mangroves, in colonies, and eggs have been found from June into September.

11. **Phalacrocorax auritus auritus** (Lesson)

DOUBLE-CRESTED CORMORANT

A Double-crested Cormorant, banded July 21, 1938, at Big Pilgrim Island, Kamouraska County, Quebec, was shot Jan. 10, 1939, at Guanabacoa, Cuba.

12. **Phalacrocorax olivaceus mexicanus** (Brandt)

FRESH-WATER CORMORANT; CORÚA

This Cormorant appears somewhat smaller than the Florida Cormorant, but the principal differences are evident only upon direct comparison.

It is much more uncommon than the other, and is more generally found in fresh-water lakes or in deep brackish estuaries, where, however, it is far from rare. In March, 1915, Mr. J. L. Peters shot a fine series in the Laguna de Centeno, near Nipe Bay. Gundlach killed but three isolated individuals during his many years of diligent collecting. It is very rare in the Isle of Pines. I have seen small flocks on the lower Rio Hanábana, so tame that they could be photographed from the shore.

13. **Anhinga anhinga leucogastra** (Vieillot)

WATER-TURKEY; SNAKE-BIRD; MARBELLA

The Snake-bird is much less common than might be expected. Perhaps the fact that for some strange reason their flesh is esteemed has helped bring this about. Even as in Florida, they are not partial to mangroves, and they

are seen in isolated pairs along the still waters of streams and rivers and more abundantly about the very few large lakes.

A bird of this species banded May 24, 1936, at Glen Allan, Mississippi, was found dead November 24, 1941, at San Juan y Martínez in the Province of Pinar del Río.

14. ***Fregata magnificens rothschildi*** Mathews

FRIGATE-BIRD; RABIHORCADO

There are several Man-o'-War bushes reported about Cuba. One is in the cays of the Doce Leguas Archipelago. I have seen Frigate-birds either roosting or nesting on a small cay off Cayo Romano, which, however, I did not visit. Ramsden speaks of several nests being found December 23, 1910, in a large mangrove tree at Puerto Escondido a few miles east of Guantánamo Bay (*Auk*, vol. 28, 1911, p. 254).

Frigate-birds are, of course, seen everywhere about the shores of the whole Island. Several individuals tamely visit Havana harbor almost daily. They are sometimes seen crossing the Island high in the air—fleeing bad weather, Gundlach thought. As a matter of fact, they undoubtedly can see both coasts from the great heights at which they often sail.

15. ***Pelecanus erythrorhynchus*** Gmelin

WHITE PELICAN

I often have seen the fine White Pelican in the Gundlach collection, preserved in the Institute of Secondary Education in Obispo Street, Havana. Moreno records the collecting of another specimen in the Yumurí Valley, at Matanzas on January 25, 1940.

16. ***Pelecanus occidentalis carolinensis*** Gmelin

BROWN PELICAN; ALCATRAZ

Found generally about the cays of the Cuban coast and shores where there are sandy beaches. A few years ago Pelicans fished regularly in Havana

harbor and off the Malecon; latterly they have been less regular visitants. They are most abundant off the north coasts of Matanzas, Santa Clara and Camagüey Provinces, probably because their principal breeding ground is Cayo Mono Grande, near Cárdenas. They do not seem to be subject to much present persecution, and probably are decreasing little, if at all, in numbers.

17. *Pelecanus occidentalis occidentalis* Linné

EASTERN BROWN PELICAN

According to Bond, *Pelecanus occidentalis occidentalis* is the Pelican of Eastern Cuba, as well as of the other Greater Antilles and northern Lesser Isles. However, of the 139 birds banded in Florida and South Carolina which have been recovered in Cuba, no less than 30 have been taken in the Oriental Province. I am inclined in view of this constant admixture of Florida blood to presume that the little West Indian pelican may be a chance visitor to Oriente. In fact, birds from North America have been found in all parts of Cuba from Los Arroyos de Mantua in the west to Guantánamo Bay in the east. That the transit of birds from the mainland of North America to Cuba is on an enormous scale is shown by these figures, and, of course, only a small proportion of banded individuals of a bird that is not regularly hunted for sport is ever recovered. Birds have been captured in all months except August and September.

18. *Ardea herodias herodias* Linné

19. *Ardea herodias repens* Bangs and Zappey

GREAT BLUE and GREAT WHITE HERON; GARCILOTE or GARCILOTE BLANCO

Great Blue Herons from Wisconsin, Michigan, Maine and Maryland have reached Cuba after being banded, and have been taken in the months of December (2), January (2), February (1) and July (1).

Whether by chance or for some definite reason, the Great White Herons seem to outnumber the Great Blues about the coast cays, while the reverse condition is generally true of inland fresh waters.

Today the Great Blue Heron is decidedly more rare than during Gundlach's time. It is, however, still common in the Zapata Swamp, but very shy. White birds have been observed in the Swamp, and of course Great Blues are often seen along the coast where the shores are muddy and fringed with mangroves. The white birds are more abundant among the cays off the coast between Caibarién and Punta de Judas than almost anywhere else. The banding records prove that North American birds reach Cuba; it would be interesting to know whether Ward's Heron does also. Nevertheless, I think the resident Cuban race is dichromatic.

20. *Casmerodias alba egretta* (Gmelin)

AMERICAN EGRET; GARZÓN

While a few Greater Egrets were seen in 1915 near the Estero de Juan Hernández on the south coast of Camagüey, and also in the Ciénaga on several recent visits, nevertheless the bird is tremendously reduced in numbers and plume-hunting is still carried on in retired localities. There is no sentiment against the use of plumage on millinery in Cuba, and plumes, not only from Cuba but from Central America and from northern South America, find a ready sale in Havana.

Curiously, all of the seven banded American Egrets either killed or found dead in Cuba were from Mississippi and not one from Florida.

21. *Leucophoyx thula thula* (Molina)

SNOWY EGRET; GARZA BLANCA

This beautiful bird is now extremely rare. Mr. J. L. Peters collected one (M. C. Z., no. 67,190), at Nipe Bay in March, 1915. It is still occasionally to be seen about the cays of the coast, but is now almost never observed in the fresh-water swamps.

A Snowy Egret, banded June 6, 1937, at Glen Allan, Mississippi, was shot on January 5, 1940, at Batabanó on the south coast of Havana Province.

22. ***Dichromanassa rufescens rufescens*** (Gmelin)

REDDISH EGRET; GARZA

Not uncommon about the mangroves of the coast and adjacent archipelagos, nor is it greatly reduced from its former status. It was observed abundantly about the west-shore marls of the Ensenada de Cochinos in 1915. It is very variable in color.

23. ***Hydranassa tricolor ruficollis*** (Gosse)

LOUISIANA EGRET; GARZA

This is still a very abundant species in all suitable localities. Five birds banded in South Carolina have been killed in Cuba.

24. ***Florida caerulea*** (Linné)

LITTLE BLUE HERON; GARZA

The most common of all the Cuban Herons. Abundant about all waterways, ponds and swamps, as well as about the muddy coast. Little Blue Herons are, as Gundlach first pointed out, sometimes to be seen in the fields in search of lizards and insects.

Two birds banded in South Carolina and Mississippi respectively have been shot or found dead in Cuba.

25. ***Butorides virescens maculatus*** (Boddaert)

GREEN HERON; AGUAITA CAIMÁN

Oberholser's work (Proc. U. S. Nat. Mus., vol. 42, 1912, pp. 529-577) on the West Indian Green Herons, in which they are separated into no less

than eight ill-defined forms, surely has served no useful purpose. Todd (Birds of the Isle of Pines, pp. 182-185) has offered some comments upon this work, and has also made reference to the Swan Island 'race.' The most reasonable plan is to consider that the West Indian birds together may be recognized as a race, for which, as Riley first proposed (Smiths. Misc. Coll., vol. 47, 1904, p. 278), the name *maculatus* of Boddaert, is available. Should the Cuban bird be separable, which it almost certainly is not, then Lembeye's name *brunnescens* is applicable to the subspecies. For this is not a separate valid species, in spite of the arguments advanced by Todd. Its habits, notes, etc., are not dissimilar from the common Green Heron's, and on February 27, 1915, J. L. Peters killed what he felt sure was a mated pair and found the two types of coloration typically represented. The '*brunnescens*' phase is also shown by a fine adult (M. C. Z., no. 72,982) from the Madeira Hammock, Florida, in the Howe-Shattuck collection, while a young bird from Quintana Roo, Mexico, (M. C. Z., no. 60,679) is almost similarly typical of this handsome aberration. Thus it is evident that it may appear sporadically outside of Cuba. In Cuba it is similarly sporadic in occurrence, but less uncommon. Ramsden has listed the records (Auk, vol. 28, 1911, p. 367). It is wholly probable that if by chance two individuals of the '*brunnescens*' type should mate, the young might all exhibit this type of coloration, while possibly it acts as a Mendelian recessive in mixed matings.

In Cuba Green Herons are found under the same sort of conditions as with us here in New England, but some birds during drought—and perhaps occasional individuals at all times—visit upland pastures where they hunt lizards and large insects.

26. *Nycticorax nycticorax hoactli* (Gmelin)

BLACK-CROWNED NIGHT HERON; GUANABÁ

I never have found the Black-crowned Night Heron a common bird, although I have seen a few individuals on each of four visits to the Zapata Swamp. It is much less abundant than the following form.

The first banded bird of this species to have been picked up in Cuba was banded by John C. Phillips and the writer at North Beverly, Massachusetts, June 7, 1913, and shot January 28, 1914, on the Sagua River. Since then fifteen other birds from Massachusetts, New Jersey, Delaware, South Dakota, Michigan, Pennsylvania, Illinois and Minnesota have been taken.

27. *Nyctanassa violacea violacea* (Linné)

YELLOW-CROWNED NIGHT HERON; GUANABÁ

This Night Heron is widespread and abundant. Both it and the preceding species are very much more shy in Cuba than in Florida, and it is not unlikely that the fact that the Cuban *guajiros* (peasants) consider them excellent eating may account for this. Nevertheless, for some reason or other, the birds are shy in the safest and most unfrequented localities.

28. *Ixobrychus exilis exilis* (Gmelin)

LEAST BITTERN

While hunting Rails in the Ciénaga de Zapata and about Lake Ariguanabo I often have flushed Least Bitterns, which appear to be not uncommon in suitable situations. They are known to breed in Cuba, and there is a question as to whether all the birds observed are not really residents, although no distinctive characters have ever been found.

29. *Botaurus lentiginosus* (Montagu)

BITTERN; GUANABÁ

During the winter months Bitterns are often flushed from reed-beds and saw-grass. They retire northward in late April. By the people they are confused with the two species of Night Heron.

30. *Ajaia ajaja* (Linné)

ROSEATE SPOONBILL; SEVILLA

Now a very rare bird. I know of no rookery in Cuban territory. Single birds occasionally are seen in company with White Ibises and the smaller

Hérons along the less frequented coast regions, where there are mud-flats. There are thus a few about San Juan de los Perros and Punta de Judas, about Cayo Romano, Cayo Coco and the *esteros* of the south coast. I observed a few small bands among the marly salt-ponds and mangrove sloughs of the wild and low-lying western shore of Cochinos Bay, the least-visited corner of the entire Republic. There are still a few about Nipe Bay.

The Spoonbills are very shy and much reduced in numbers as compared with Gundlach's time.

Bruner in the Memoirs of the Poey Natural History Society gives some information to show that this bird is a rare resident of undisturbed areas along the south coast of the Island.

31. **Guara alba** (Linné)

WHITE IBIS; COCO BLANCO

White Ibises were reported by Gundlach to exist in incredible bands in many parts of the country. Now they are much reduced, although in no immediate danger of extinction. I have seen bands of no mean size along the wild northern coast of Pinar del Río, about Palo Alto and elsewhere along the south coast of Camagüey, in the Zapata Swamp and among the cays of the north coast. They are, however, much rarer in Cuba than in Florida, and many days will pass while one is constantly moving about suitable localities when only an occasional singleton will be seen. Its flesh is considered very delicate, which it really is.

32. **Plegadis falcinellus falcinellus** (Linné)

GLOSSY IBIS; COCO PRIETO

For several years I made annual trips to a plantation called San Francisco, near Sarabanda, Gundlach's old headquarters for exploring the Zapata Swamp. The proprietor, Don Francisco Morales, offered me most courteous hospitality, and daily his horses carried me down along the course of the Rio Hanábana to where this river flowed out into the Great Swamp. The morass itself is

bordered by a wide area of open country with scattered clumps of palms and hardwood *cayos*, the word here being equivalent to the Floridian hammock. This border zone slopes gently toward the Swamp and is wider or narrower as the rains cause the whole Ciénaga to rise or lower. The inner marshes of the Ciénaga in general consist of an enormous deposit of silt, held partially in suspension and resting on a firm limestone basin or substratum. Among them are a few open lakes, but generally the ooze supports a sort of half-floating vegetation of grass and reeds with clumps of willows, and many of the pools are so choked with aquatic vegetation that they show no open water at all. This enormous territory offers tempting soil and is in imminent danger of being completely drained. It has been reduced in size already by drainage. When cane is planted in the Ciénaga, the last chapter will be written in the Cuban history of the Glossy Ibis and other splendid birds. Day after day I rested late in the afternoon under some trees which allowed uninterrupted vision far out over the open marsh, and watched for the bands of Ibises which fed regularly along the drier shores, where, in fact, cattle also wandered to eat the succulent hyacinths stranded along the marge. Nor man nor beast dared venture far out on the *tembladera*, for this skin of vegetation rippled and sagged, and to break through spelt oblivion. The Ibises came regularly from the southwestern horizon in wavering lines, perhaps three or four hundred in all. They alit upon the *tembladera* and began to work shoreward. Their method of progression was always the same—the birds behind hopping up, flapping a half-dozen wing-beats, and then alighting just in front of the foremost of the walking band. This was constantly repeated as the birds ran along, probing the deep vegetation for snails and insects. They were really shy, and it was only after uncomfortable hiding and interminable waiting that a few specimens were secured. Usually the bands would jump into the air as one bird and wheel about when their line of progress in feeding brought them dangerously near a clump of trees.

I believe this is the only band, or at least part of the only colony, in Cuba. Gundlach only once saw a flock, also in the Ciénaga, and saw a young bird in a lake near Cárdenas and once got one from the Havana market. It has been recorded also only once from the Province of Oriente (Ramsden, *Auk*, vol. 30, 1913, p. 368).

I have not been to San Francisco de Morales since 1915, and that year clearing the forest about the edge of the open country had begun. This forest, then the home of bands of Parrots and one of the last resorts of the rarer Ground Pigeons, is probably now wholly felled. The *Plegades*, however, probably nest in some small *cayo* far out in the Ciénaga, out of sight of land,

so to speak, and until the Swamp is drained they probably are safe from extermination. I suspected that this band would survive longer than the remnant of the birds left in Florida, but in this I was entirely wrong, for the birds in Florida now number several thousand and nest on the inaccessible Red Fish Reef in the western part of Lake Okeechobee under the sheltering care of the Audubon Society. The remnant left in the St. John's River marsh in Brevard County is also slowly gaining in numbers. Moreover, Bond has found the bird in the marshes along the south coast of the Province of Pinar del Río.

33. *Mycteria americana* Linné

WOOD IBIS; CAYAMA

Gundlach has recorded the Wood Ibis from about Cárdenas, and from the Ciénaga where he writes that it lives in the extremest inner *cayos* and visits the edge of the Swamp only with the coming of the rains. I have seen a few individuals about the lake called Punta Gorda near the mouth of the Rio Hanábana, and a few about the lakes in the saw-grass east from Caleta Rosario on the eastern shore of Cochinos Bay. They are very shy, and they will not be reduced in numbers until the Swamp is drained—or until the natives learn to really aim a rifle.

34. *Phoenicopterus ruber* Linné

FLAMINGO; FLAMENCO

There are still several colonies of Flamingoes about the Cuban coast. There are a few in Nipe Bay, a larger number about the shores of Cayo Romano, Cayo Coco and the Isle of Turiguanó. There are colonies scattered along the south coast from the Zapata Peninsula to the mouth of the Rio Cauto, but they are extinct, I believe, in the Isle of Pines. Everywhere they are occasionally killed for food.

As is well known, there is now a large colony of birds which breed regularly at the race-track at Hialeah, Florida. These are birds from Cuba. Fed properly, they retain their vivid colors and do not bleach as they were wont to do in captivity.

Professor Abelardo Moreno of the University of Havana writes me (January 15, 1942) that Flamingoes received at the Zoölogical Garden in Havana and coming from the south coast of Camagüey, were found to be heavily infested with intestinal parasites, and only those lived which were medically treated. He believes that this may mean that the colonies on the south coast of Cuba are in danger.

It would be a real joke on the writer if the last Flamingoes to survive should be the race-track colony in Florida. He certainly was free enough in expressing his opposition to its establishment.

It may be added here that since the Island of Great Inagua has come under the enlightened control of the Erickson family the prospects of the Flamingoes there have improved.

35. *Mergus serrator* Linné

RED-BREASTED MERGANSER

Gundlach records a single specimen, bought in the Havana market. It is now mounted in the Gundlach collection in the Havana Institute.

36. *Lophodytes cucullatus* (Linné)

HOODED MERGANSER; PHEASANT DUCK

A rare winter resident. It appears occasionally in the markets of the larger cities, especially Havana and Matanzas. I have seen it once on the lower Rio Hanábana, in 1915.

37. *Anas platyrhynchos platyrhynchos* Linné

MALLARD; PATO INGLÉS

We know of the Mallard in the literature only from Gundlach's record of a flock which appeared near Cárdenas in 1850. The professional duck-hunters of Mariél and Lake Ariguanabo, however, all know the species as the *pato inglés*, and it probably appears sporadically from time to time.

38. **Anas crecca carolinensis** Gmelin

GREEN-WINGED TEAL; PATO DE LA FLORIDA

A few are killed in the autumn as they pass Cuba on migration.

39. **Anas strepera** Linné

GADWALL

Gundlach once received a single specimen, sent to the Havana market for sale and purchased for him by a friend.

40. **Anas americana** Gmelin

WIDGEON; BALDPATE; PATO LEBANCO

The Widgeon arrives in Cuba regularly every winter, and I have seen small bands on various occasions on Lake Ariguanabo and Lake Punta Gorda in the Ciénaga. It often is shot in the estuaries about Mariél, Bahía Honda and Cabañas, west of Havana.

41. **Anas discors** Linné

BLUE-WINGED TEAL; PATO DE LA FLORIDA

The most abundant migrant Duck. It arrives in Cuba in early September and appears there often in great hosts, coming at evening to the fresh-water ponds. The day probably is spent about the inaccessible mangrove swamps of the coast. None are known to stay and nest.

Banded Teal from Illinois, Kansas, Minnesota, Louisiana, North and South Dakota and Ontario have been killed in Cuba. There are sixteen records in all, scattered over the whole island.

42. *Anas cyanoptera* Vieillot

CINNAMON TEAL

Recorded twice from Cuba.

43. *Spatula clypeata* (Linné)

SPOONBILL DUCK; SHOVELLER; CUCHARETA

A few Spoonbill Ducks arrive in Cuba every autumn, and retire northward in April. They usually are associated with bands of Blue-winged Teal, and they have the same habit of appearing in the lakes at dusk and of taking refuge either at sea or in the mangrove swamps of the coast during the day.

44. *Dafila acuta tzitzihoa* (Vieillot)

PINTAIL; PESCUEZILARGO

A fair few appear every winter, not in large flocks but, as Gundlach says, 'in families.' Their habits are similar to those of the Spoonbill Duck in many respects, but they often spend more of their time in the mangrove lagoons.

Three banded Pintails have been killed in Cuba, from North Dakota and Michigan.

45. *Paecilonitta bahamensis bahamensis* (Linné)

BAHAMA PINTAIL

Gundlach once killed a male in a lake near Sagua La Grande. It would not be surprising if further exploration showed that the Bahama Duck appeared from time to time along the little-known north coast of the Oriental Province.

46. *Aix sponsa* (Linné)

WOOD DUCK; HUYUYU

The Wood Duck is resident in Cuba, but no differences can be detected in Cuban specimens; they appear absolutely typical. It is equally abundant in summer and winter, and few, if any, migrants arrive. The Ducks nest in broken palm trunks, either standing or fallen, and in other stumps or hollow trees as well. Although in general they are partial to shady streams and narrow, sluggish rivers, we shot several specimens when I was collecting at Lake Ariguanabo with Lord William Percy in 1920. The Wood Duck is so esteemed for its excellent flesh that it is in real danger of extermination, and today it is very far from being a common bird, less abundant even than ten years ago. This is becoming increasingly true, and of late years I have seen very few of these ducks in the ponds of the Botanical Garden at Soledad, where there is a fine growth of lotus, to the seeds of which they are very partial.

47. *Nyroca valisineria* (Wilson)

CANVAS-BACK

Gundlach reports that in 1842 and 1850 a few Canvas-backs appeared in Lake Ariguanabo. I never have seen one in Cuba.

48. *Nyroca americana* (Eyton)

REDHEAD

Recorded from Cuba by Bond.

49. *Nyroca affinis* (Eyton)

LITTLE BLUEBILL; CABEZÓN

A winter visitor to the larger open lakes. On almost every visit to Lake Ariguanabo I have seen large flocks cutting about at sundown.

50. *Nyroca collaris* (Donovan)

RING-NECKED DUCK

The Ring-necked Duck appears almost every year in numbers about equal to those of the Little Bluebill, according to Gundlach. As a matter of fact, I believe that the species are often confused by the local gunners and that this one is very decidedly the rarer of the two. It certainly appears nowadays much less often in the Havana market, which I often have visited daily to examine the 'game' exposed for sale.

51. *Glaucionetta clangula americana* (Bonaparte)

AMERICAN GOLDENEYE

Recorded by Bond from Cuba.

52. *Charitonetta albeola* (Linné)

BUFFLEHEAD

A rare accidental visitor. Gundlach once got one in the Havana market.

53. *Erismatura jamaicensis* (Gmelin)

RUDDY; PATO ESPINOSO

The Ruddy Duck breeds regularly in Lake Ariguanabo, and, so far as I know, at this station only. It is, however, far from improbable that there are other small colonies breeding in the lakes of the Ciénaga, such as the Laguna del Tesoro. The Ruddies and Masked Ducks act very peculiarly in Cuba, and have adopted customs which are admirably protective in this peculiar environment. They ordinarily swim about, entirely submerged or with only the beak out of water. When they rest on the surface it is almost always among the *malanguetas*, the great upstanding lotus-like bonnet leaves, which afford effective shelter. They never—or almost never—fly, and are very rarely seen resting or swimming in open water, for there *are* little open areas in this great garden of floating plants which mask the fact that this is really a lake, large and deep, in spite of the little water that is visible. The pot-hunting *guajiros* who live about the lake have an uncanny skill in shooting the birds. They push about in tiny pirogues with a long bamboo pole, as silently and as fast as possible. They thus surprise the ducks resting among the bonnets, and the birds, of course, dive and swim away. The only visible sign is a slight agitation of the bonnet leaves—almost imperceptible except to the well-trained eye. The hunter shoots just ahead of this motion, and usually gets the duck. There are many turtles in Ariguanabo; they shake the bonnet stalks just a bit more vigorously than do the ducks—and I suppose that turtles are occasionally shot at.

54. *Nomonyx dominicus* (Linné)

MASKED DUCK; PATO AGOSTERO

What I have said about the Ruddy Duck applies equally to the Masked Duck. The name *Agostero* is derived from its reputed nesting in August and its becoming apparently more abundant at that time. It is rather less common in the big lake than the preceding species, but it occurs throughout the Island. Scattered pairs or very small colonies may be found in any pond large enough

to support beds of saw-grass, bulrushes and aquatic plants, in which the birds may hide. During the dry season at Lake Bacuranao, not far east of Havana, they are hunted with dogs, which are taught to catch the birds, loath to leave their haunts even when low water strands the floating vegetation which gives such excellent refuge when well afloat.

I remember one afternoon in April, 1915, the train bound for Guane stopped for repairs not far from Consolación del Sur, and the long delay allowed me adequate opportunity to watch a pair of *Agosteros* swimming about in a tiny pond in a nearby pasture, which was certainly less than an acre in extent. Never before or since have I seen Masked Ducks so confiding, and since that time I have never passed that little pond on my many journeys to and from without hope of a repetition of this unique opportunity, but so far no second chance has been vouchsafed. I have seen Masked Ducks very occasionally in the ponds in the Ciénaga, but all of the large series which we have in the Museum of Comparative Zoölogy were got from the two lakes Ariguanabo and Bacuranao. It is very unfortunate that it is about these two localities that the mongoose now fairly swarms. Introduced from Jamaica to Havana many years ago, it never has spread through Cuba with that rapidity which was so noteworthy elsewhere in the Antilles. The mongoose is no swimmer, but it creeps about the floating islands of willows and plays havoc with many ducks' nests.

Masked Ducks when sent to market are highly prized, but of course only a few find their way to the stalls of the game-sellers each year. The closed season on game, in Havana and Matanzas Provinces especially, is well enforced, the Rural Guards being entirely efficient in these populous portions of the Island.

During our visit to the Lake in 1920 Lord William Percy, my companion, made extensive notes, covering about all the local information obtainable, from which he has kindly extracted the following:

"According to local information, the Masked Ducks are much less secretive in late summer and autumn when the Lake is higher and provides less cover from view; in such conditions we were told that the Masked Ducks flew a good deal of their own accord, especially early and late in the day, and experience elsewhere with these birds did not suggest that they were difficult to flush, though they rarely flew farther than the nearest patch of cover. On the other hand local hunters agreed that, while the Masked Ducks took to wing quite frequently, the Ruddy Ducks never did so under any circumstances. This, if true, is remarkable, but it is possible that the Cuban race, being entirely stationary, may have developed a more skulking habit than

that of the migratory race in Canada and the United States. (It certainly is a fact that the *Erismaturas* of the high Andean lakes are so unwilling to fly as to give an impression of incapacity to do so, for during several consecutive months of constant association with them I never saw one on the wing, though efforts were frequently made to induce them to fly.)

"In Cuba the Ruddy Ducks were in full, new breeding dress on the thirtieth of January, 1921, and were actually breeding on that date, whereas the male Masked Ducks were in full moult and young birds were obtained which appeared to be from four to five months old. We were told that this bird bred in August and was locally known as *Agostero* for that reason.

"The call of the male Masked Duck is very distinctive, '*kirri-kirroo, kirri-kirroo, kirroo, kirroo, kirroo,*' and the bird has a curious habit of responding like a cock Pheasant to such noises as the banging of a punt-pole on the water or an explosion in the distance. The female makes a short hissing noise, repeated several times.

"No first-hand information was collected with regard to these birds' nesting habits, but a local hunter pointed out several nests which he said were those of Masked Ducks. According to him, the nests were always placed amongst short, round rushes, and contained from five to six eggs but never any down at all."

During the last fifteen years we have been damming streams, making more ponds in the Garden at Soledad, and one of the rewards of increasing our area under water has been frequent opportunities to observe these fascinating ducks at close range and for long periods of time. To date they have never bred at Soledad.

55. *Dendrocygna arborea* (Linné)

TREE-DUCK; YAGUASA

Tree-ducks may be told by their rather long legs and neck and somewhat goose-like appearance.

Gathering the eggs of the *Yaguasa* is regularly practised in Cuba. The Tree-ducks nest, off and on, all summer, and build in many situations. The nest often is placed in a bunch of bromelias or airplants—*curujeyes* they are called in Cuba—or in hollow stumps. The eggs sell for twenty cents each, and fanciers far and wide over the Island hatch them under domestic poultry and

raise the ducks for pets. In yard or patio they serve a useful purpose, for they break up fights among the domestic fowls and whistle at the approach of strangers.

The cutting of the lowland forest has already very greatly reduced the number of Tree-ducks, and they are today gone from many localities where but a few years ago they were very abundant. There is only one small band left at Ariguanabo. They pass the day in the great *maciales*, or bulrush beds, and fly forth at night to feed on the *palmiche*, the racemose fruit of the royal palms. About the Ciénaga, and in retired situations of the less densely populated coastal regions, they still are abundant, retreating to the inner fastnesses of some swamp by day, but at night sallying out to visit the palm groves in the cultivated plantations. The characteristic monosyllabic whistle is very agreeable and is mimicked by the native hunters to decoy the birds. The flesh is excellent; it is one of the most delicious of all game birds. However, it is one of the birds to which the market certainly should be closed, although of late years but very few are received.

These birds now breed regularly in the sanctuary at Soledad, and it is not uncommon to see twenty or more of the beautiful fowl stalking majestically over the green lawns or resting in the shade of a cluster of giant bamboo during the heat of the day. They disappear from time to time but usually only for short periods in January, February or March.

56. *Dendrocygna viduata* (Linné)

BLACK-MASKED TREE-DUCK

A very rare accidental visitor. Gundlach recorded four secured in the market at Santiago de Cuba, but gave no date. He also believed that once one was killed in the Zapata Swamp.

57. *Chen hyperboreus hyperboreus* (Pallas)

LESSER SNOW GOOSE; GUANANA

Formerly an abundant winter visitor, arriving in October and staying until spring in the Zapata Swamp. Gundlach notes that the newly arrived

birds are usually not very shy, and that year after year they pass to and fro over the same route from roost to feeding ground. A famous local hunter at Aguada de Pasajeros, Francisco Llorente by name, has told me, on many occasions on different visits, that Geese were fast growing very rare. During very many visits I have seen only three or four small family bands in flight over the Swamp.

58. **Chen caerulescens** (Linné)

BLUE GOOSE; GUANANA PRIETA

I never have seen a Blue Goose in Cuba, but Gundlach records that a very few occasionally arrive in the autumn and return north in April. He observed a good many with the glasses, but killed, himself, only the one immature specimen now in the Institute in Havana.

59. **Anser albifrons albifrons** (Scopoli)

WHITE-FRONTED GOOSE

A rare but regular winter visitor to the Zapata Swamp. In Gundlach's time a few were received at the Havana market from other places. I have seen only one family, in March, 1916, near the mouth of the Rio Hanábana.

60. **Cathartes aura aura** (Linné)

TURKEY BUZZARD; AURA or AURA TIÑOSA

The Turkey Buzzard occurs throughout the Island in countless numbers. It is so abundant, so tame and so well known, that it seems entirely unnecessary to dilate upon its habits.

About 1915 there was much controversy pro and con in the matter of Buzzards being a vehicle for the transmission of hog cholera and other diseases of domestic animals. The final judgment was to absolve the bird.

61. **Coragyps atratus atratus** (Bechstein)

BLACK VULTURE; GALLINAZU

Bruner and Bond both observe that there have been a number of sight records for this bird in Cuba, but as yet no specimen has been collected.

62. **Polyborus cheriway auduboni** Cassin

AUDUBON'S CARACARA; MEXICAN BUZZARD; CARAIRA

The Caraira is probably as abundant now as it ever was. Living in scattered pairs, and preferring open grazing lands to forest, it has a greater range than formerly. The sugar plantations perforce maintain large cattle ranches, as all cane still is hauled from the field to mill or railway by bulls. Thousands of head of cattle are raised for the Havana market, as well.

The Cubans call the Caracara the King of the Buzzards (*Rey de las Auras*), because when a beast dies it is first to arrive and usually feeds alone. As a matter of fact its powerful beak and an undoubted preference for fresh meat, account adequately for this habit. The Buzzard is not powerful, and prefers, and can tear up easily, only meat which is softened by decay.

I have several times seen Carairas chase large birds. Gundlach once saw one chase, tire out and kill a White Ibis. In dry weather they frequent pools, and feed voraciously upon the dead and dying fish.

The flight is crow-like, direct, fast and with heavy, noisy flappings. Gundlach notes that when frightened or irritated it gives a high-pitched shriek, but I believe that observation was made from Gundlach's famous pet which he raised from the nest and kept for fifteen years. The Caracara habitually rests perching, usually in the very top of a high tree or on some steep hillock. Often in the morning, or before sundown, it throws back its head until it almost touches its shoulders and gives its high, cackling cry, which gave rise to the Brazilian name of Caracara, the Cuban Caraira, and the less apt Argentine name of Carancho.

The nest, which I have seen but once, near Palo Alto, was among parasitic plants in a high tree. Gundlach says this is the usual site, but that palms

sometimes are chosen. As with so many Cuban birds, the nesting season varies, and eggs have been found in November, December and March.

My specimens from Cuba and the Isle of Pines differ in no wise from mainland examples collected from Florida to Panama.

63. ***Circus cyaneus hudsonius*** (Linné)

MARSH HAWK

A common and widespread winter resident, the great majority seen always being young birds. It never has been known to nest.

Four young Marsh Hawks, banded in various parts of the United States, have been shot in Cuba.

64. ***Accipiter gundlachi*** Lawrence

GUNDLACH'S HAWK

One of the rarest Hawks in the world. In Gundlach's time, he said, "Not rare in the woods but uncommon about cleared lands." He added that adults in full plumage were rarely seen, and that he had but once found the nest, in the Zapata Swamp, with young ready to fly. It is reported very harmful to poultry and of the swiftest flight. I have seen Hawks on one or two occasions which I felt sure were this species, flying swiftly over the Soledad Gardens. The Museum in Cambridge has a few birds, fortunately including a gorgeous adult male, collected by Señor Gaston Villalba near Artemisa in western Cuba during the last few years.

65. ***Accipiter fringilloides*** Vigors

SHARP-SHINNED HAWK

This little Hawk is less rare than the preceding, and it has been taken within a few years upon Pico Turquino, near Yara, by R. H. Beck, during the

Brewster-Sanford Expedition, while in search for nesting Petrels upon that mountain. I never have killed it, although I have seen it flying several times. The type was taken by MacLeay, who lived near Guanabacoa. (For an account of his life in Cuba, see Mario Sanchez, Mem. Soc. Cubana Hist. Nat., Felipe Poey, vol. 2, 1916, p. 73.) Gundlach mentions killing a number of specimens, and among other localities he speaks of San Diego de los Baños and Bayamo, both very familiar to me from various visits, which, however, have never provided the opportunity to garner one of these much desired treasures.

More recently Bond records this bird from Los Palacios, in Pinar del Río.

66. *Accipiter striatus velox* (Wilson)

SHARP-SHINNED HAWK

Gundlach once killed two young Sharp-shinned Hawks at a coffee plantation in the Sierra de Yateras. He believed that they had been hatched near by. He speaks of adults as being rare, but gives a description of adult as well as juvenal plumage based on specimens. I have seen nothing of this bird on the Island. There is a chance that this is a case of mistaken identity, and that the very closely allied *Accipiter fringilloides* was the species that Gundlach really had.

67. *Buteo borealis solitudinis* Barbour

GAVILÁN DEL MONTE

One of my first sights of Red-tailed Hawks was when in the Lomas de los Acostas, far in western Cuba, the peasant women called from ridge to ridge in the high open savanna hills the news that the *Gavilanes del Monte* were about. Other women then far and wide would come out from their tiny highland huts and call to their fowls the well-known warning. Red-tailed Hawks may be seen flying high in the air over any of the wilder parts of the Island, but they are especially common about the high *lomas*, the dry, sparsely grown granitic hills of Pinar del Río. Here they have better chance to observe their prey than about the forested sierras.

68. **Buteo platypterus cubanensis** Burns

BROAD-WINGED HAWK

This Hawk is far less rare than the Red-tailed, and more widely distributed. It is, however, disappearing with deforestation and is certain soon to be very rare. It is characteristic of the edges of the forests, and of quiet wood lanes, and is rarely seen near houses or plantations. It feeds usually on small birds, according to Gundlach, but Ramsden has recorded it catching minnows which were massed together in shallow pools after long drought (Auk, vol. 28, 1911, p. 485).

69. **Buteogallus gundlachi** (Cabanis)

CUBAN CRAB HAWK; BATISTA

The Crab Hawks appear in the distance like very large Everglade Kites. In the field the color and method of flight of the two species are surprisingly alike—except that, when flying high and wheeling, these Hawks scale with motionless wings like the large Buteos.

The *Batista* is one of the finest of Cuban birds. It flies impressively high in air, circling and whistling constantly its musical three-note call which has given rise to the native onomatopoeic name. The Crab Hawks are nowhere abundant, a pair here and another pair away yonder, in regions where there are heavy and extensive mangrove forests, which shelter the great white crabs on which the *Batistas* feed. The Ensenada de Cochinos, the cays off the north coast of Camagüey and the west coast of the Isle of Pines are the regions where Crab Hawks may most easily be observed. If there are any about, the crabs, all opened in characteristic fashion, will be found in the mangrove swamps. The Hawk pounces on the crab, gathers the legs and claws of each side in one of its feet, and, reaching down, removes the carapace by hooking the bill under its front edge. While hunting at dawn and early eve the birds fly low and are not shy at all, but at midday they circle hour after hour far in the blue. It is then that their whistling call can be heard for many miles. Gundlach has described the nest and eggs, and so also has Bangs (Auk, vol. 22, 1905, p. 307).

70. **Chondrohierax wilsoni** Cassin

GAVILÁN CAGUARERO

This Snail Kite is confined to that part of the Oriental region which supports the beautiful arboreal *Helix picta*, or *caguayo*, on which it feeds. I have seen its feeding places but once, and I owe the specimens now before me to my friend Charles T. Ramsden, who kindly collected them for me. His competent activity about extreme eastern Cuba has for years constrained me to explore other regions where no such vigorous local enthusiast was wont to work. Thus I have been brought in but little contact with this bird. Ramsden says it is very local, but, its haunts once found, it is easily secured on account of its stupid and confiding habits.

Bond remarks that the range of this bird once extended as far west as Trinidad in the Province of Santa Clara.

71. **Rostrhamus sociabilis levis** Friedmann

EVERGLADE KITE; CARACOLERO or GAVILÁN CARACOLERO

The Everglade Kite is common in the Ciénaga where ampullarias abound. It also is usually to be seen about Lake Ariguanabo, and was reported by Gundlach from ponds in the Cauto Valley. My old companion, Fermin Cervera, a former Spanish soldier once resident in Cuba, wrote me that on May 12, 1915, he shot four "Snail Hawks," and on the same day found two nests, each containing their eggs. Those of one nest were almost ready to hatch, those of the other recently laid. Both nests were in willow (*Clavelina*) trees in the middle of Lake Ariguanabo and were about a yard and a half above the water-level. The nests were well made of twigs and grasses. The eggs are now in the Museum of Comparative Zoölogy, and are the first recorded for this bird from Cuba, for Gundlach never found it breeding. It comes and goes in a most inexplicable manner, and often on visits to Ariguanabo I have not seen a bird.

Its flight is singularly like a Marsh Hawk's, only more flapping and labored. As is well known, its sole food consists of ampullarias, snails which

from dusk to dawn often swim with the foot expanded, hanging from the surface film of the water. The bird feeds at morn and eve, and has its regular stations where the snails are skilfully shucked unbroken, and where the heaps of shells accumulate and last many years. The Kites inevitably are growing rarer in Cuba, as in Florida, for draining goes on apace.

72. ***Elanoides forficatus forficatus*** (Linné)

SWALLOW-TAILED KITE

A very irregular visitor. The following records are given by Gundlach: 'Many years ago' several seen flying over a lake near Cárdenas; 'later' a skin made by a friend who shot one from a flock of about fifty seen near Bahía Honda; 'observed' at Ciénaga de Zapata. He then adds three more definite dates: in 1856, when a band appeared near the outskirts of Havana; five years later (1861), when one was killed near Havana; again in five years (1866), when another was killed east of Guanabacoa. One seen at Soledad in April, 1938, flying high.

73. ***Falco peregrinus anatum*** Bonaparte

DUCK HAWK; HALCÓN¹

Recorded by Gundlach as an annual winter visitor from the United States. He writes that it tarries about the shores of lakes and swamps, ready to dash forth after ducks, coots or gallinules. He also makes special mention of its change of speed in flight.

I never have seen a single Duck Hawk in Cuba. Two banded Duck Hawks have recently been killed in Cuba—one from Key West, killed in Pinar del Río, and one from Madison, Wisconsin, killed in the same Province.

¹ Used only by bird students; the *guajiros* call all hawks *Gavilán*.

74. *Falco columbarius columbarius* LinnéPIGEON HAWK; HALCONCITO¹

The Pigeon Hawk is rare in Cuba, and Gundlach doubted whether this typically migrant bird ever remained to breed, although Gosse had observed the nest in Jamaica—doubtless a very exceptional case. What, then, was my surprise on April 27, 1915, when my friend Cervera brought me a pair shot while nest-building in the Botanical Gardens just outside the city of Havana. These birds are now in the Museum of Comparative Zoölogy (nos. 67,408 and 67,409). They differ in no wise from other Pigeon Hawks.

75. *Falco sparveroides dominicensis* (Gmelin)

CUBAN SPARROW HAWK; CERNÍCALO

The Cernicalo is very common everywhere. The light and rufous phases of plumage have caused much confusion. They, however, signify but little. I have a large series before me, and it may be of interest to list the birds.

- M.C.Z., 46,649, Remedios, Santa Clara, H. Bryant, 1864, extremely rufous.
 M.C.Z., 73,132, Monte Verde, Oriente, C. Wright, 1861, extremely rufous, coloration asymmetrical.
 M.C.Z., 114,894, Holguín, Oriente, O. Tollin, 1904, extreme rufous phase.
 M.C.Z., 113,386, Santa Fe, Isle of Pines, W. R. Zappey, 1904.
 M.C.Z., 14,895, Holguín, Oriente, O. Tollin, 1904.
 M.C.Z., 46,652, Remedios, Santa Clara, H. Bryant, 1864.
 M.C.Z., 46,650, Cuba, H. Bryant, 1864.
 M.C.Z., 43,146, Remedios, Santa Clara, H. Bryant, 1864.
 M.C.Z., 46,651, Remedios, Santa Clara, H. Bryant, 1864.
 M.C.Z., 67,229, Guaro, Oriente, J. L. Peters, 1915.
 M.C.Z., 65,532, Banes, Oriente, W. C. Forbes, 1914.
 The above eleven birds are typical of the rufous type.

¹Used only by bird students; the *guajiros* call all hawks *Gavilán*.

- M.C.Z., 46,654, Remedios, Oriente, H. Bryant, 1864.
 M.C.Z., 46,656, Cuba, H. Bryant, 1864.
 M.C.Z., 113,384, San Juan, Isle of Pines, W. R. Zappey, 1904.
 M.C.Z., 113,380, Júcaro, Isle of Pines, W. R. Zappey, 1904.
 M.C.Z., 113,381, Laguna Grande, Isle of Pines, W. R. Zappey, 1904.
 These five birds may be termed intermediates.

- M.C.Z., 113,385, Santa Fe, Isle of Pines, W. R. Zappey, 1904.
 M.C.Z., 113,383, San Juan, Isle of Pines, W. R. Zappey, 1904.
 M.C.Z., 113,382, Los Almacigos, Isle of Pines, W. R. Zappey, 1904.
 M.C.Z., 43,145, Remedios, Santa Clara, H. Bryant, 1864.
 M.C.Z., 61,077, Aguada de Pasajeros, Santa Clara, T. Barbour and L. A. Shaw,
 1913.
 M.C.Z., 67,223, Preston, Oriente, J. L. Peters, 1915.
 M.C.Z., 67,224, Preston, Oriente, J. L. Peters, 1915.
 M.C.Z., 67,225, Preston, Oriente, J. L. Peters, 1915.
 M.C.Z., 67,226, Preston, Oriente, J. L. Peters, 1915.
 M.C.Z., 65,536, Banes, Oriente, W. C. Forbes, 1914.
 M.C.Z., 73,133, Remedios, Santa Clara, N. H. Bishop, 1864.
 M.C.Z., 114,897, Holguín, Oriente, O. Tollin, 1904.
 M.C.Z., 67,228, Buena Ventura, Oriente, J. L. Peters, 1915.
 M.C.Z., 67,227, Buena Ventura, Oriente, J. L. Peters, 1915.
 These fourteen birds all represent the light phase.

Nos. 46,649, 73,132 and 114,894 are clearly asymmetrical in coloration.

Another point of great interest is offered by M. C. Z. nos. 69,984 and 69,982 from Choco near Sosua, Santo Domingo. The first bird is very light, the second is distinctly dark, not as dark as the darkest Cuban birds but very clearly not of the light phase. This is noteworthy, for Todd on page 197 of his 'Birds of the Isle of Pines' says that the dark phase "does not extend to Haiti or Santo Domingo." Personally I do not believe for a moment that there is any question of more than a single variable species existing in Cuba. I unfortunately have no notes to show in what proportion cases of mixed matings occur between the color phases. I know that they do occur, and often.

Sparrow Hawks are found everywhere over the Island, and they thrive in cleared and cultivated areas as well as in the wilder regions.

76. ***Pandion haliaetus carolinensis*** (Gmelin)

OSPREY; FISH HAWK; GUINCHO

Fish Hawks, called *Guincho* by the creoles, arrive in September in Cuba and usually remain but a short time. A few stay through the winter and a few undoubtedly breed. Gundlach saw one in summer near Cárdenas, and Gosse reports that there are occasional nests found in Jamaica. I never have seen many *Guinchos* about either the coasts or the inland waters. The lighthouse-keeper at Cabo Cruz told me that a pair nested near there annually, and I saw two Fish Hawks near the light in April, 1914. I have seen them along the Rio Cauto and about Cienfuegos Bay, and during the spring of 1915 Brooks and I collected a pair, evidently mated, at the Ensenada de Cochinos. We saved only one, however. Its fellow fell victim to the vicissitudes of Latin-American collecting. We were asleep in the back room of a tiny and very dingy country store; our day's booty was hung from the clothes-line outdoors, as we had come in late and tired and the night was cool. About midnight a strolling party of revolutionists came in to help themselves from the store—and this they did with a will—and then one spied our clothes-line. In a moment he had it cut down, the birds shaken off to the waiting pigs, and, as we were inside conversing discreetly with the leader of the crew, we knew nothing of our sad loss until the pack had left. This, the revolution of the spring of 1915, brought us various woes, and the government *mobilizados* (volunteers) and the revolution *alzados* (patriots!) were about equally troublesome to the itinerant naturalist.

Three banded Ospreys have been killed in Cuba, two near Havana and one at Júcaro in Camagüey. From New York or New Jersey, they were shot in October and December, offering no information not already known.

77. ***Colinus cubanensis*** (Gould)

CUBAN BOB-WHITE; CODORNÍZ

The typical Cuban Quail, a very distinct species, is today hard to find, except in the Isle of Pines and in remote localities. Introductions from Florida and Texas for restocking purposes, have sadly mixed the blood of the Quail about Havana and in the accessible central regions of the Island. "Although

the species is perfectly distinct and peculiar to Cuba, curiously enough, many Cubans believe that all the Quail were introduced." This belief, which he records, gave even Gundlach some concern, for he wrote—and I translate freely: "Regarding this species the opinions of naturalists and natives do not agree. There exists the tradition that over a hundred years ago Colonel Don José Cramen, Chief of Engineers in Havana, caused some Quail of both sexes to be brought and released in the suburbs of Guadalupe near Havana. They extended first westward to the Vuelta Abajo region, then toward the Vuelta Arriba, eastward. They did not arrive in the extreme Oriental Province until the Dean of the Cathedral in Santiago got some from Havana and released them there, now some seventy years ago. This was told me by my friend Don José de la Luz Caballero."

The original Cuban Quail probably was very restricted in distribution in early Colonial times, and was no doubt known only to the very few settlers who were familiar with the sterile savanna lands. Elsewhere the Island was wooded and offered no attraction to Quail until the process of deforestation was far advanced. Quail were introduced, not once but doubtless many times and to many different places, by planters who had no idea that there were Quail indigenous to Cuba itself. Gundlach late in life suspected that something of this sort might have taken place. There is no record of introduction to the Isle of Pines, and there only pure-bred birds occur. I have also seen typical Cuban Quail in numbers only about Guane, Mendoza and the remote savannas of Pinar del Río. Elsewhere the birds usually are intermediate between the Floridian and Cuban types, and many are almost typical of the mainland form, since Florida has doubtless been the source of many purchased shipments for release.

The call is quite similar to the Northern Quail's, and their habits likewise. The great fields of cane afford a splendid range, and today Quail swarm over wide areas. Shooting is not allowed about cane plantations because the dry trash burns like tinder, so that Quail are safe in the *cañaverales* (cane plantations) during the winter open season, and out of season, during the rains, but few are killed and these only in the more remote districts.

78. *Rallus elegans ramsdeni* Riley

CUBAN KING RAIL; GALLINUELA

The native King Rail is really a rare bird, appearing even rarer still because it is so retiring and shy. One never knows where they may be met with. A

tiny pond choked with long grass in an open pasture, a stream meandering slowly through some open meadows, these are the favored spots. They do not frequent the great marshes of the Zapata region nor the larger lakes. Long lush grass in shallow water, and a quiet situation, and the scattered pairs live a retired and colorless existence. They may sometimes be flushed just once, when come upon very suddenly, but their presence is generally made known by tracks in the mud and the rattling call at dusk. When the rains come on they are sometimes seen in the drier pastures and grassy fields, doubtless because the water has become too deep for comfort in their wonted haunts.

Ramsden found a low bridge over a small stream, under which the Rails were accustomed to pass, and by trapping at this point he secured a number of specimens, including the series which, when sent to Riley, afforded the type of this distinct form.

There are a few of these birds which have best responded to the fact that no shooting has ever been allowed in the now much increased acreage of the Harvard Garden at Soledad. King Rails may often be seen walking about the shores of the Garden ponds paying small regard to observers.

79. *Rallus longirostris caribaeus* Ridgway

CUBAN CLAPPER, or MANGROVE RAIL; GALLINUELA DE LOS MANGLARES

The Mangrove Rails abound everywhere where mangrove forests fringe the coasts. They are heard often, and many cackling voices cry out, reacting to some sudden noise, a gunshot or a gunwale hit with an oar. They are seen only by chance, except that occasionally they have a liking for walking along the water's edge at dead low tide. The maze of trunks and aërial stolons, so familiar to those who have tried to walk among the mangroves, gives the Rails an ideal refuge; so also the clouds of mosquitoes emerging from the crab-holes discourage one who would wait for a shot. Thus Brooks and I have occasionally killed an odd Rail, and J. L. Peters in February, 1915, found a swamp being cleared of mangroves near Nipe Bay and shot a nice series of Rails which haunted the brush-piles of extirpated mangroves awaiting fire, and which were loath to leave their immemorial home. Our way of securing Rails was to find where the fringing zone of coastal mangroves was not too wide. Then with machetes we cut a path from upland to the shore. A fence about two feet high was set out down the path—a fence simply of sticks set

side by side. In this little six-inch gaps were left open, every three yards or so. Traps in these gaps—well padded—would catch every Rail near by, and a fine series could soon be secured. We tried this in the Isle of Pines, on the shore of the Rio Casas, near Nueva Gerona, and in a few hours had a fine series representing the name *R. l. leucophaeus* Todd—far more than would have been secured in months by the ordinary ways of hunters and collectors.

80. ***Rallus limicola limicola*** Vieillot

VIRGINIA RAIL

An accidental migrant which occasionally appears in the Havana market.

81. ***Pardirallus maculatus inoptatus*** (Bangs)

SPOTTED RAIL; GALLINUELA ESCRIBANO

In Gundlach's time this bird was far from rare, and as it lived in the open pastures about ditches and reedy banks of streams as well as in swamps and fens, it often found its way to the Havana market. I thought it was confined to the Provinces of Havana and Matanzas until I had a fine chance to see one at Soledad about five years ago. There are no records for either the most eastern or most western Provinces of the island. Ever since I first saw the single specimen mounted in Gundlach's collection, I had sought news of this bird. I had come to the conclusion that it had wholly disappeared, and was well satisfied to get a somewhat faded specimen, mounted for many years, from a case of stuffed birds in a Matanzas school; I owe my thanks, for helping me get this bird, to my friend Carlos de la Torre. Then, in February, 1913, I chanced to visit the market at early dawn of the very day on which I planned to sail for Key West. There was but a single bird hanging in the principal stall where game was sold, and that was the beautiful fresh specimen which I brought Bangs, to be his type. I found that it had been sent in by a market gunner who lived near the Escalera de Jaruco. Since then I have made many efforts to learn more regarding the bird's habits and to get additional speci-

mens, but in vain. One other specimen has come to the market, and this was secured by Dr. Victor Rodriguez, and the skin is now in C. T. Ramsden's private collection in Guantánamo. More recently Bond recorded it as locally common on Santo Tomás in the Península de Zapata.

82. **Porzana carolina** (Linné)

SORA; GALLINUELA CHICA

From October to April it is not uncommon to flush Soras from rushes and reed beds, but they never are very abundant and certainly are not so common as they were said to be when Gundlach was alive.

83. **Porzana flaviventer gossii** (Bonaparte)

WEST INDIAN YELLOW RAIL; GALLINUELA CHICA

Yellow Rails from Cuba and Jamaica have much less yellow on the under surfaces than typical birds from Guiana, so that I am constrained to reestablish Bonaparte's name.

The little Yellow Rails simply swarm in Lake Ariguanabo and in the ponds of the Ciénaga, although they always have been considered really rare and few birds have been less well represented in collections.

I owe my fine series to having learned by chance that they live far from shore in the extensive bonnet-beds. When frightened, they hop into one of the big rolled-up bonnet leaves and stay there quietly until convinced that danger has passed. I have thus caught them in my hands. They are so shy, and move so stealthily, that securing a series demands a quick eye and a finger even quicker on the trigger. By thrashing the bonnet-beds at Lake Ariguanabo with a long bamboo, many Yellow Rails have been flushed, to take short, feeble flights. I never have seen a single individual except where there were bonnet-beds, and I believe that they frequent *terra firma* only to build their nests and lay. Gundlach once saw an empty nest which he presumed was made by a Yellow Rail, but the eggs are wholly unknown.

84. **Laterallus jamaicensis jamaicensis** (Gmelin)

BLACK RAIL

Gundlach got a specimen found dead on the roof of a house in Havana. He believed that he had heard the call, but he never actually collected a specimen.

In December, 1942, Doctor Abelardo Moreno took a specimen near Havana, and he informs me (*in litt.*) that several Black Rails have come to the Zoölogical Garden at Havana and that they are thriving in captivity.

85. **Cyanolimnas cerverai** Barbour and Peters

ZAPATA RAIL

I figured this beautiful Rail in the Auk (Vol. 45, pl. 4, 1928). It is confined to the Zapata Peninsula, and although I named this bird, it is one which I have never seen in life. Bond believes that it may well be related to a South American Rail called *Ortygonax*, which it certainly resembles considerably. He adds that it is not wary and is easy to find. "When alarmed it utters, like a Limpkin, a loud 'kwowk' and usually runs rapidly for a few feet before stopping motionless with tail raised, the white under tail-coverts being very conspicuous. Its flight is short and weak."

86. **Gallinula chloropus cachinnans** Bangs

FLORIDA GALLINULE; GALLERETA DE PICO COLORADO

The common Gallinule is still an abundant bird in many places. About ponds and lakes, along rivers which run through open country, and even in tiny pasture sinks with standing water it may always be found. These are canny birds and take refuge in the vegetation quickly, for they have learned

that nowadays many people own guns and favor Gallinules to eat. They walk gracefully, picking up their feet like thoroughbreds, and swim and dive well. Occasionally they visit cultivated fields and play havoc with the maize. When they take to flight they run for some distance, and even when well under way they touch the surface of the water with their long toes after the manner of Coots.

The nesting season is long, and young birds may be seen running about over the floating vegetation with their parents at almost any time of year. The nest, to which access is gained by a sort of bridge or runway, is well known and has been often described.

The flesh is tender and of fine flavor, and many find their way to the markets of the larger cities. If the bird were not prolific, often raising eight or nine young, it would certainly be rarer and far more restricted in range than it is at present.

This is a common resident in the Soledad Gardens.

87. *Porphyrula martinica* (Linné)

PURPLE GALLINULE; GALLERETA AZUL

Today the Purple Gallinule is much more uncommon than the other species. It probably is much less common than in Gundlach's time. He speaks of its abundance and the damage done to rice-fields and of its even eating ripe bananas. Today rice is not grown in Cuba, and the bird is not sufficiently abundant to find its way often into the banana plantations (*platanales*). For some years we planted bananas extensively at Soledad for shade for tender young plants. The Purple Gallinules picked into every raceme of fruit while it was still green and hard. Its favorite haunts are the shores of ponds or streams where there are high thickets of cane or tall bushes, for the bird is an active climber. Instead of taking flight or running over the vegetation when surprised, it rushes to the nearest cover and climbs quickly to some dark leafy shelter. Even when undisturbed, it spends much time perching or stepping delicately from bough to bough. When wounded, this species also swims and dives well. As with its fellow, it nests at almost any time, and it builds similarly. Usually a tussock is doubled over for a foundation, and tall grasses are left to roof over the nest. Gundlach has noted that the

young do not all begin to swim about at once, but one each day, evidently as the eggs are hatched in succession.

This lovely bird is always shot for the table, and for that reason perhaps does not seem to be able to hold its own. Nevertheless, until the Zapata Swamp is drained, it will always have one great and inaccessible refuge.

88. *Fulica americana americana* Gmelin

AMERICAN COOT; BLUE PETER; GALLERETA DE PICO BLANCO

The Coots appear in numbers each autumn on the Cuban fresh-water lakes. Some stay but a short while, to reappear on the return migration in April. Their cheery cackling and active ways of swimming or running about and chasing one another, make the birds invariably amusing and attractive to watch. To one familiar with Coots as they appear in hordes in the Florida lakes every winter they offer no habits or customs in Cuba worthy of special note.

Some Coots, however, remain throughout the year, and the bird is well known all through the Island as a resident breeder. Its nesting is essentially like the Gallinules.' Bond (Proc. Acad. Nat. Sci. Phila., vol. 94, 1942, p. 93) shows reasons to believe that the Antillean Coot (*Fulica a. caribaea*) may occasionally be found in Cuba.

89. *Aramus guarauna pictus* (F. A. A. Meyer)

LIMPKIN; GUAREAO

Limpkins are growing rare. Unfortunately they do not confine themselves to frequenting the swamps and morasses difficult of access, but in Cuba prefer open lowlands with fenny sinks, the edges of high woods, and even pasture lands. I often have seen them standing conspicuously on top of some brushy thicket far from water or even from marshy ground. Whereas in Florida they feed largely on ampullarias, breaking the snails open by vigorous blows of their beaks, in Cuba they seem to prefer lizards and the terrestrial

molluscs which abound. They are naturally stupid but soon learn to fear man, and in settled localities where they are hunted more or less they become very shrewd. Their flesh is excellent. The high, resonant cry, often repeated, and taken up by every bird within hearing, has given rise to the wonderfully apt native name, *Guareao*. The flight of the bird, with legs trailing downward, neck outstretched and wings snapping heavily, is very crane-like. The character of the flesh, rich and dark in color, the flight, and the voice, suggest a relationship to the Cranes far more than to the Rails. The nesting habits, however, are very different, for they build not only in rushes and upon depressed grasses but in trees upon horizontal limbs and in bunches of parasitic vegetation. Gundlach has found the nests in every month.

The *Guareao* is so conspicuous that it often is seen from the train window while passing through the Province of Camagüey, which is largely given up to pasture land. I found it abundant about Aguada de Pasajeros and the borders of the Zapata Swamp. In western Cuba it is rare, and much of the Province of Oriente, since it is so hilly, is still too much overgrown with forest to attract Limpkins, for they are wholly birds of the more open lowlands. There are a number which now stalk about the grounds of the Soledad Gardens and may be observed near at hand at any time.

90. *Grus mexicanus nesiotus* Bangs and Zappey

CUBAN SANDHILL CRANE; GRULLA

The Cuban Crane still exists in decreasing numbers on the great open, sterile savannas of western Pinar del Río. There are some about Viñales, Mendoza, Guane and the outlying bare wire-grass hills with scattered pines. Elsewhere they are rare. I have seen a few in southern Matanzas Province, about Alacranes and Unión de Reyes, and a few north of Aguada de Pasajeros, and also along the line of the old *trocha* near the south coast. I never have seen any east of the *trocha*, that wide cleared zone, with its tumble-down blockhouses, which the Spaniards established from north coast to south, from Morón to Júcaro, to try to prevent rebel bands from moving eastward or westward during the Wars for Independence. In Cuba, as in Florida, the Cranes live in pairs or families, not regularly in flocks, but occasionally several families will unite for aerial manoeuvres, when they fly in characteristic goose-like formation.

They are shy and have fine power of vision, but still they are killed, because they persist in returning to favorite feeding grounds, which often are fresh burns. An area of grass land may be burned over and a hide made, and before long Cranes will appear, to eat the scorched reptiles and burned insects, and to dig with their bills for succulent roots and beetle larvae in the soil now denuded of matted grass.

In Florida the Crane always nests on a little island of its own building in needle-grass ponds, but in Cuba Gundlach reports them hiding their nest under some bush or shady tussock of high, rank grass. They are not often seen about water in Cuba, whereas in Florida they occur in the flatwood ponds as often as in the open, piney prairies.

In the Isle of Pines Cranes are not uncommon, and we have secured specimens there. They often are kept as pets and become very tame. Cackling loudly whenever strangers approach—and their voices can be heard an incredible distance—they make excellent watch-dogs.

91. *Himantopus mexicanus* (Müller)

BLACK-NECKED STILT; ZANCUDO

I saw my first Stilts in Cuba from the top of the great lighthouse at Cabo Cruz in the spring of 1914. This lookout gave over a varied scene and one worth a moment's digression to describe. The peninsula of Cape Cruz itself is low and rocky, dry, arid and covered with cacti, thorny acacias and the like. Inside the hook to the north are marl flats and patches of mangroves, enclosing shallow salt-ponds which broil and glisten and dance in the burning sun. Up the coast toward Belig and Niquero extended the lowland forest, rich with mahogany, sabicú and many other precious woods. This forest caught wet winds, which the Cape did not, and had already attracted foreign capital, assuring its early reduction and ultimate destruction. Eastward from the Cape rose the great ridge of the Sierra Maestra, El Monje, Ojo de Toro and, far in the blue distance, Turquino itself. Our midnight arrival at the Cape in a tiny shallop—I was with de la Torre—had resulted in the clanging of heavy doors as the 'watch' suddenly awakened and felt that bandits, always to be thought of, had this time really materialized. We had kicked our way through the cacti in the bright moonlight, and, tired and very sweaty, we hoped for a place to sleep. It was no small task to convince the sturdy Spaniards that

sleep, not robbery, was our one interest, but we soon became friends; the lightkeepers of Cuba, all Spaniards, are a fine, sturdy crew and hospitable to a fault. We soon came to use the light as a lookout, and down in the salt-ponds we saw the Stilts every day. A small resident band of perhaps twenty individuals fed regularly through the hottest hours in a pond so deep that the water reached nearly to their bellies. The flight, with neck and long legs extended, is unlike that of any shore-bird and reminds one more of the Jacana's. I saw Stilts also occasionally about fresh waters and collected one at Aguada de Pasajeros on February 4, 1913. I always have found them very shy and hard to approach. Gundlach found the nest and eggs in May and has described them.

92. *Capella gallinago delicata* (Ord).

WILSON'S SNIPE; BECASIN

A regular winter visitor, and one which may be really abundant if the rains have been long and hard so that extensive wet pastures and low, moist meadows do not dry out through the winter. There are, however, few localities where there are enough birds to give one really good shooting. The vast majority are scattered hither and yon, in pairs and single birds, where there are little sinks of moist land. At times, however, I put up larger numbers about the edge of the Ciénaga near the Rio Hanábana.

A few birds winter about the ponds of the Harvard Garden at Soledad and sometimes become quite tame.

93. *Limnodromus griseus griseus* (Gmelin)

DOWITCHER¹

Arrives in numbers in October; many stay through the winter, usually remaining in rather large flocks. Since a few birds usually were to be seen in summer, Gundlach thought that it might occasionally breed. However, it has not been found to do this.

¹ In general all Sandpipers are called *Zarapico* or *Títete*; the larger Plovers are called *Pluvial*; the lesser forms, and by many all Plovers, are called *Frailecillo*.

94. *Limnodromus griseus scolopaceus* (Say)

WESTERN DOWITCHER

A very rare visitor.

95. *Micropalama himantopus* (Bonaparte)

STILT SANDPIPER

Seen once at Cabo Cruz on the spring migration. Gundlach records its regular passage through Cuba in September and again in April.

96. *Erolia minutilla* (Vieillot)

LEAST SANDPIPER

A very common winter resident, often fairly swarming on the mud-flats about the mangrove swamps all winter long, and usually appearing in flocks mixed with other species of shore-birds.

97. *Erolia melanotos* (Vieillot)

PECTORAL SANDPIPER

The Pectoral Sandpiper arrives in September, and some remain until April. Gundlach once killed a number, in July, 1857, in a swamp near Bayamo.

98. ***Erolia fuscicollis*** (Vieillot)

WHITE-RUMPED SANDPIPER

A very few White-rumped Sandpipers arrive in early October; they remain but a short time and then disappear, to come again in April and early in May.

99. ***Ereunetes pusillus*** (Linné)

SEMIPALMATED SANDPIPER

According to Gundlach, the Semipalmated Sandpiper arrives in September and retires again in April. Peters collected some that were flocking with Least Sandpipers at Nipe Bay early in March, 1915.

100. ***Ereunetes mauri*** Cabanis

WESTERN SANDPIPER

Recorded once by Gundlach (Journal für Ornithologie, 1856, p. 419).

101. ***Crocethia alba*** (Pallas)

SANDERLING

An occasional transient.

102. ***Limosa fedoa*** (Linné)MARBLED GODWIT; ZARAPICO REAL¹

Now excessively rare. Gundlach years ago killed a few in September on the beaches near Cárdenas and Júcaro.

¹ *Real* (Royal) is a common augmentative, and *Zarapico Real* is used for the large Godwits, Curlews, etc.

103. ***Limosa haemastica*** (Linné)

HUDSONIAN GODWIT

Only one record, a single specimen secured from the Havana market by Gundlach.

104. ***Totanus melanoleucus*** (Gmelin)

WINTER YELLOW-LEGS

Small bands appear during spring and autumn migrations; possibly a few are winter residents. They are called up and shot, as in New England.

105. ***Totanus flavipes*** (Gmelin)

SUMMER YELLOW-LEGS

Very much more common than the preceding species. Large numbers pass a few days in the fresh-water marshes, and sometimes about the mangroves, in September, and again in February and March—Gundlach says April, but they really appear earlier.

106. ***Tringa solitaria solitaria*** Wilson

SOLITARY SANDPIPER

Passes through Cuba in pairs or trios—not in flocks—from late August to mid-October. Gundlach does not mention its reappearance in the spring, but Zappey shot one on the Isle of Pines, May 11, 1904.

107. *Catoptrophorus semipalmatus semipalmatus* (Gmelin)

WILLET

I know that the Willet breeds in the Bahamas, and Gundlach surmised that it might do so in Cuba. He saw birds in June and July about La Caimanera in Guantánamo Bay, and had seen them elsewhere at almost all times. I have seen but a few Willet in Cuba, on the west coast *salinas*, those shallow, marly salt-ponds near the west shore of the Bay of Cochinos.

108. *Bartramia longicauda* (Bechstein)

UPLAND PLOVER

Years ago the Upland Plover appeared in the cultivated fields of Cuba and followed close at the ploughman's heels. They usually came in late August or early September and reappeared in April or May. I never have seen a single individual.

109. *Tryngites subruficollis* (Vieillot)

BUFF-BREASTED SANDPIPER

A single record by Gundlach of one killed near Cárdenas in April.

110. *Actitis macularia* (Linné)

SPOTTED SANDPIPER

A few are seen each year during migration; it does not arrive in flocks. Mr. Peters collected a single female at Preston, near Nipe Bay, March 2, 1915.

111. ***Numenius phaeopus hudsonicus*** (Latham)

HUDSONIAN CURLEW

I have, on various occasions, seen a few Curlews about the mangrove shores. They wade the muddy shallows and, should wind or tide raise the water, they perch in the mangrove trees—most uncurlewlike. Gundlach's records are about like these of mine. He once saw a few in October in a salt-marsh at the mouth of the Rio Cauto, and some in June and July about Júcaro, but he adds that he had seen them among the cays of the coast at various times.

112. ***Squatarola squatarola cynosurae*** Thayer and Bangs

BLACK-BELLIED PLOVER; PLUVIAL

An occasional pair or trio may be seen during any of the winter months on the exposed, eroded limestone shores. No large flocks are seen.

113. ***Pluvialis dominica dominica*** (Müller)

GOLDEN PLOVER; PLUVIAL DORADO

I have seen no Golden Plover in Cuba. Gundlach gives some account of its habits, and remarks that it occurs from September to April. He says nothing about its abundance, and one is not very convinced that most of his observations do not apply to shore-birds in general more than to Golden Plover in particular. Nevertheless his description of the plumages is very good indeed.

114. ***Oxyechus vociferus vociferus*** (Linné)

KILLDEE; FRAILECILLO

A Killdee is resident in Cuba, but beyond doubt continental migrants also are to be found there in winter, as Todd has shown this to be the case in

the Isle of Pines. I often have seen birds at all times of the year, but never have collected any skins.

115. ***Oxyechus vociferus rubidus*** Riley

WEST INDIAN KILLDEE

Gundlach's description of the nest and eggs applies beyond doubt to this resident race which has been noticed since his death. This is a very well-marked form.

116. ***Charadrius hiaticula semipalmatus*** Bonaparte

RING-NECKED PLOVER

Seen by Gundlach in September and also in June among the coastal cays. This led him to believe that the bird might nest in Cuba. As a matter of fact, these late June birds are early returning migrants. Mr. W. W. Brown found this to be the case during his visit to the Cayman Islands.

117. ***Charadrius melodus*** Ord

PIPING PLOVER

A few reported by Gundlach as having been seen on the beach at La Maya near Matanzas. All these birds were in immature plumage. I have seen them occasionally in early spring on the white sand-stretches back of the rocky beach between Morro Castle and Cojímar.

118. **Charadrius alexandrinus tenuirostris** (Lawrence)

SNOWY PLOVER; FRAILECILLO

Gundlach first found this little resident Plover breeding near La Caimanera in July, 1858. The three eggs were laid in the foot print of a horse. The parents he collected and sent to G. N. Lawrence, who described the bird as *Aegialitis tenuirostris*. Later the type was sent to Ridgway, who considered it identical with Cassin's species *nivosus* (a synonym of *alexandrinus*). Later still the bird was given subspecific rank. I have several times seen birds which I believed were this Plover, but always when engaged on some other errand than shooting birds; so I have no Cuban specimens at hand.

119. **Pagolla wilsonia rufinucha** (Ridgway)

WILSON'S PLOVER

Another uncommon resident, found about beaches and salt-marshes. According to Gundlach it lays four eggs in a concavity without any lining, usually in May or June. Unfortunately I do not know the bird from autopsy.

120. **Recurvirostra americana** Gmelin

AVOCET

Another accidental visitor, extremely rare. Gundlach killed one in a salt-pond at Punta de Icacos and got one in the Havana market.

121. **Arenaria interpres morinella** (Linné)

TURNSTONE

A few may be seen every winter on the aeolian limestone reefs and shores, and, much more rarely, about beaches. Gundlach thought that it might nest

in the cays, but in this case as with others he doubtless mistook early returning migrants for summer residents.

122. *Haematopus palliatus palliatus* Temminck

OYSTER-CATCHER

Very rare and shy. Found usually in small family groups. Seen only on the most retired coasts or among the cays. It may nest in Cuba, and probably does so. Gundlach once saw it in June.

123. *Jacana spinosa violacea* (Cory)

GALLITO

To the northern bird-lover who visits Cuba for the first time no bird is at once so engaging as this one and so wholly satisfactory, for it crystalizes immediately the certainty that here at last is one common and conspicuous creature wholly foreign to his ken. Cuba swarms in winter, the visitors' season, with northern migrants, and many of the characteristic, peculiar and purely tropical birds are shy and retiring and are never seen by the casual traveller. The gaudy little Gallito, however, frequents every small roadside pond, and even comes to flooded pastures, which offer a suitable but temporary abiding place only after heavy rains. The Jaçanás run about the shores and over the lily-pads, ever on the move. They chase each other and appear constantly pugnacious, and every few minutes they rise for short flights which show the brilliant golden yellow of their wings. When they alight they stand a second with wings upraised after the fashion of the Upland Plover. In the smaller ponds it is unusual to see more than a pair or two, but on the great morasses of the Ciénaga, with many square miles of aquatic vegetation, the Jaçanás may be seen daily in large bands. Their voice is a sharp metallic bark, high-pitched and oft repeated.

The nest, simply a mass of decayed grasses and lily stalks, is placed on floating plants. They often hatch several broods a year. The young dive almost as soon as they are hatched, and hide with only the beak above the surface. The mother bravely defends young and nest, crying out and flying to and fro, not only urging the young into hiding, but soon causing a sympathetic commotion among all the Jaçanás within hearing.

Gallitos occur throughout the whole Island, but since ponds are more frequent in middle and western Cuba than in the Oriental Province, the greater part of the population is concentrated where suitable habitat exists.

The taxonomic status of the race *violacea* has been adequately discussed by Todd in his 'Birds of the Isle of Pines' (*l. c.* p. 217).

124. ***Stercorarius pomarinus*** (Temminck)

POMARINE JAEGER

Bond records this bird from Havana and Matanzas Bay.

125. ***Stercorarius parasiticus*** (Linné)

PARASITIC JAEGER

Not infrequently seen in winter at sea, crossing from Key West to Havana.

126. ***Gelochelidon nilotica aranea*** (Wilson)

GULL-BILLED TERN

A very rare bird. Gundlach records but two specimens, one taken at Júcaro and one at Guantánamo.

127. **Hydrochelidon nigra surinamensis** (Gmelin)

BLACK TERN

Adults and young have been reported often about both coasts and fresh-water lakes. Gundlach in his account gives no specific date of arrival or departure.

128. **Anous stolidus stolidus** (Linné)

NODDY; GAVIOTA BOBA

Not generally seen about the coasts until one approaches a breeding ground, when they fairly swarm. They nest on many bushy cays in the same manner as has been so often described at Dry Tortugas.

129. **Rynchops nigra nigra** (Linné)

BLACK SKIMMER

An excessively rare or accidental visitor. There are two records, both by Gundlach, one for the south coast and the other for the Bay of Matanzas.

130. **Alle alle** (Linné)

LITTLE AUK

During the winter and coincident with the disastrous enforced migration southwards of Little Auks, in 1932, a number were picked up dead or dying on the shores of Cuba. There have been but few others, accidental records, notably in 1934 by Bruner.

131. **Larus argentatus argentatus** Pontoppidan

HERRING GULL; GALLEGO

Herring Gulls used to be rare off the Cuban coast. In over fifty years' residence Gundlach gleaned but these records: a young bird was obtained by Lembeye in the Havana market and, years later, an adult male was procured there by Gundlach himself. Later he killed one in Matanzas Bay, and one from a boat near Cárdenas. Now the conditions are completely changed. With protection in the North the population pressure of these birds has increased so that, after severe weather in winter there, Gulls may be seen in countless thousands in Key West Harbor—enormous swarms of gray birds with only a very few adults. In Cuba during the last few years no less than eleven banded birds have turned up, all young birds.

132. **Larus atricilla** Linné

LAUGHING GULL; GALLEGO

The Laughing Gull is common, widespread, and reported by Gundlach to breed on some of the cays and beaches along the coast. I never have seen one of these breeding colonies, but I have seen numbers of the birds. The four banded birds which have been recovered are all immature. They abound especially about Matanzas and Manzanillo, at Belig near Cabo Cruz, in Cienfuegos harbor and along the south coast of Camagüey from Júcaro to Casilda, the port of Trinidad. I often have heard of the Gulls' making the Pelican disgorge by flapping their wings about its head and then flying off with the fish, only to lose it in turn to that brigand of the sky, the Man-o'-War Bird. This, however, I never have seen.

133. **Larus delawarensis** Ord

RING-BILLED GULL

This bird is now seen frequently about the shores of Cuba in winter.

134. ***Phaethusa simplex*** (Gmelin)

LARGE-BILLED TERN

There is a single Cuban record, based on an immature individual got by Charles T. Ramsden from Nipe Bay, May 28, 1909 (*Auk*, vol. 29, 1912, p. 100).

135. ***Thalasseus maximus maximus*** (Boddaert)ROYAL TERN; GAVIOTA¹

Royal Terns are often seen about the coasts and are said by Gundlach to nest upon some of the coastal cays.

Eighteen banded birds have been recovered in Cuba; they came from nesting colonies in South Carolina. Two others were banded at Cobb's Island, Virginia.

136. ***Sterna sandvicensis acuflavida*** Cabot

CABOT'S TERN

While this Tern is often seen about the few scanty beaches of the cays and coasts, its nest and eggs never have been found in Cuba.

137. ***Sterna hirundo hirundo*** Linné

COMMON TERN

Previously unrecorded from Cuba, but no doubt it has always occurred in small numbers. Between 1930 and 1938 nine banded specimens from Michi-

¹ All Terns are generally called by this name, and, as with our country and fisher folk, the various species are not differentiated.

gan, Minnesota, Ohio and Massachusetts have been shot or more often found dead about beaches of Pinar del Río, Matanzas, Oriente and Havana Province.

138. ***Sterna antillarum antillarum*** (Lesson)

LEAST TERN

Common about salt-marshes and beaches, especially about the islands of the north-central coast. It is known to breed.

139. ***Sterna dougalli dougalli*** Montagu

ROSEATE TERN

A rather rare bird about the coasts. Gundlach believed that it occurred principally, if not wholly, off the south coast. It occurs sparingly on both sides of the Island. It is not known to breed. Three young birds, banded in Massachusetts, were captured in Cuba in 1938 and 1939.

140. ***Sterna anaetheta melanoptera*** Swainson

BRIDLED TERN

Gundlach reported a large breeding colony at Cayo Mono Grande. I have not found the bird breeding, although I often have seen Bridled Terns off the coast.

141. ***Sterna fuscata fuscata*** Linné

SOOTY TERN; GAVIOTA MONJA

Gundlach gives a long account of the methods of feeding of this and other Gulls and Terns, and of their nesting at Cayo Mono Grande and Cayo Piedras near Cárdenas.

142. **Hydroprogne tschegrava tschegrava** (Lepechin)

CASPIAN TERN

Four birds banded in Michigan and one at Georgian Bay, Ontario, were later shot at Matanzas, or Nipe Bay, in Cuba, two in each locality.

143. **Starnoenas cyanocephala** (Linné)

BLUE-HEADED QUAIL-DOVE; PERDÍZ

The Blue-headed Quail-dove, on account of its brilliant blue crown, cannot be confused with any other species. Formerly it was a common denizen of all the lowland forests of the Island, where the soil was not too dry. Today it is greatly reduced in numbers, both because it is so extensively trapped for food and because the forests are being constantly cut away. There are two ordinary methods of trapping Ground Doves in general use among the country people in Cuba. One involves the use of a *casilla*, a cage made of boughs or twigs, tied one upon the other, but at different intervals so that the complete structure is pyramidal and about two feet square and a foot high. This is put out in the open woods and baited with *tripa de guira*, the mushy inner pulp of the wild calabash, which is full of seeds. The *casilla* is tilted, and a 'figure four' drops the contrivance when it is touched by the bird fussing about inside. Sometimes a small dish of water serves for bait. Another method is to erect a net on hoops of creeper, and put bait beneath, where a decoy either alive or stuffed is often put out conspicuously. The hunter, in hiding, imitates the *húp úp* of the bird by means of a small hollow gourd.

The bird is called *Perdíz* (Partridge) because of its firm white flesh and the noise it makes when flushed. In common with the other Ground Doves, it prefers to run away from an annoyance rather than take flight. I have collected a good many by lying prone on the forest floor and simply watching for the bird to walk about. Much of the lowland forest in Cuba is flooded during the rainy season, often for several feet, and this eliminates the very low undergrowth, so that one may often see long distances with the eyes near the level of the ground. Standing up, it is impossible to see off at all, so thick are the vines and creepers. In 1915 I found *Perdízes* very common in the low woods about five miles inland from Júcaro and Palo Alto. I shot a good many,

and the *guajiros* had dozens caged to sell to the planters about Ciego de Avila, who eat them. This forest today is largely gone. About the cayos of the Ciénaga, where I got the other Ground Pigeons in numbers, the Blue-headed Doves were very rare, although I shot a few specimens. In Oriente the bird is still common where it has not been trapped too hard, and here it occurs in the highland forest where also suitable open woods are sometimes to be found.

I have liberated a number of these doves in the 'Seboruco' at Soledad, a reserve which we keep for native plants only. They have never stayed there to be seen again after their release.

144. *Oreopeleia chrysia* (Bonaparte)

KEY WEST QUAIL-DOVE; TORITO OR BARBEQUEJO

This Ground Dove has habits much like those of the *Perdiz* and is often caught for food by the same means. Its flesh is excellent, although less esteemed than the *Perdiz*. It is known as *Torito*, the Little Bull, from its habit of bobbing, or *Barbequejo*, from the moustache-like markings. This, like the following species, is also called *Boyero*, or Ox-Driver, for its note, an oft repeated and prolonged monosyllabic *coo*, somewhat resembles the noise constantly made by men urging their oxen to strain to a heavy load. The *Torito* is found in dry upland woods as well as in the low country, and I have flushed a good many in the low but thick forest of the limestone hills, or *sierras*, of Pinar del Río. I also shot one once on the Sierra de Cases of the Isle of Pines, in low, scrubby second-growth (*manigua*), hardly to be called a forest. In the cayos within the Zapata Swamp it was far less common than the Ruddy Quail-Dove; nevertheless we often shot a few for food as well as to skin.

The Geotrygons, as I still like to call them, walk slowly about on the ground with the head usually pulled in and not extended, and not bobbing except when disturbed or frightened. Then they bob vigorously, as does the *Perdiz* all the time, and this species is, I think, the shyest and most prone to take flight of any of the group.

Gundlach found nests from February to June, little flat platforms of sticks set on some low bunch of epiphytes.

Nowhere abundant, indeed a rather rare bird throughout its considerable range, the misnamed Key West Quail-Dove is one of the species which sooner or later will completely disappear.

145. *Oreopeleia montana* (Linné)

RUDDY QUAIL-DOVE; BOYERO

With habits essentially like those of the preceding, this forest beauty is much more abundant and more confiding. By standing watching some little sunlit glade, or lying flat on one's belly on the damp forest floor, patience was generally rewarded by a sight of the Ruddy Quail-Doves, provided one chose a suitable haunt in which to lie in wait. None of the Quail-Doves occur in all situations where, from the character of the terrain, one might expect them. They were really abundant, however, in the low woods between Zarabanda and San Francisco de Morales and the Zapata Swamp, and equally so in a very fine stretch of damp woods which I have visited but once, far to the south of Bolondron. Here a pig ranch, called Hato Jicarito, kept by a hospitable Señor Perez, stretched its limits to the Rio Hatiguanico. The pigs ran wild, and little of the land was cleared. There was some second growth, but much was virgin forest, too inaccessible to make the timber worth while, and in 1913 the nearest sugar mill, *Armonía*, was too far off to grind cane should Perez plant it. I often wonder whether or no this happy state of affairs still continues. It is almost certain that some one of the host of new mills has run in a railway to haul out the splendid hardwood for ties and to encourage small planters (*colonos*) to cut the woods (*monte*) and plant cane in the slash (*tumba*).

146. *Oreopeleia caniceps caniceps* (Gundlach)

CAMAQ

This splendid bird is one of the ornithological treasures of Cuba. Its rich metallic blue mantle and delicate gull-gray crown mark it conspicuously. Once more widespread, it is now rare and restricted in range. Formerly it occasionally was caught by the dove trappers, and still once in a great while it is brought to Guantánamo. In this way Charles T. Ramsden has got the bird alive and has obtained a few skins for his cabinet. Dr. Henry Bryant had a skin in his collection, labelled "Remedios, 16 Mar. 1864," but in all

northern Santa Clara there is now no wood where it might persist. Gundlach knew of it from Yateras, whence the Guantánamo specimens still are obtained; from near Bayamo, where I could get no news of it whatever; from near the old plantation La Fermina near Bemba, now Jovellanos, a region now wholly given up to cane and pasture; and from La Maya at the entrance to Matanzas Bay. Here there is still some uncleared land with dense *manigua*, but hardly offering, at first sight, a refuge for a bird of the heaviest wet forest. It is to two large wooded cayos, by no means easy of access, called La Isla, and Cayo Yaguajusta, at the edge of the Ciénaga, some miles southwest of Aguada de Pasajeros, that the hunter who would test his patience and good luck must go to get this bird.

I have tried for it many times, and have spent day after day creeping about the forest floor, watching and waiting, working slowly toward the spot where oft-repeated *hūp-hūp-hūp*, peculiarly resonant and far-reaching, led me to hope for a shot. The bird is very shy, so retiring, in fact, that few of the professional hunters even know of its existence. Francisco Llorente gave me my first clue to the Camao, and it was with him that I shot the first one, just at evening. It came strutting out into the waning light to cross a muddy stream on a greasy, slimy log. It fell into the water, a gorgeous gem in as plain a setting as one could well imagine. Then, hunting alone, I soon found that my patience and somewhat less hasty shooting gave me distinct advantages, until at last a beautiful series, safely dried, allowed me to close with great satisfaction one of the most unexpectedly successful chapters of my Cuban excursions.

I leave these lines as I originally wrote them for they record a thrill of long ago, now a fragrant memory. Bond has found the bird in a number of additional localities.

The nest of *caniceps* has been found but once. This was in August. Gundlach unfortunately broke the eggs. No mention is made of their number, but he noted that they were similar in appearance to those of the other Quail-Doves. These are usually three in number and ochraceous white.

147. *Chaemepelia passerina insularis* (Ridgway)

CUBAN GROUND DOVE; TOJOSA

The little *Tojosa* soon becomes a familiar friend. It picks its way daintily about the dooryards and abounds everywhere in cleared fields and gardens.

Too small to offer a tempting morsel, it is not shot and, fearless of man, it prefers cultivated to wild lands, so that its future is safe beyond that of most of its feathered compatriots. Its voice, soon familiar, is a single simple sad tone, a prolonged *hūp*. At any time after February it makes its slipshod platform nest of twigs and grass in the lower branches of some citrous tree or on airplants growing very low. For so small a bird its flight is strong, direct, and rapid, beginning with much noisy snapping of wings, like our domestic pigeons, and wholly unlike the gamy whirr of the Quail-Doves.

148. *Zenaida macroura macroura* (Linné)

CUBAN MOURNING DOVE; RABICHE

In spite of constant persecution the *Rabiche* still exists in enormous numbers. It is a far more common bird than is its northern ally, our Mourning Dove—even when that is concentrated on its winter range. This is the favorite game-bird of Cuba, since its habits make possible a large bag with very little effort. During the spring and summer the *Rabiches* are scattered in pairs far and wide, but, once the nesting season is over, they begin to flock. They have their regular roosts, called *dormitorios*, to which they repair year after year. These may be in some outstanding grove of royal palms or some clump of tall trees in a wide pasture. There is a famous roost in the high willows in the middle of Lake Ariguanabo. They also choose regular drinking places to which they repair morning and evening, and at these *bebederos*, or at the roosts, the hunters lie in wait for the Doves and kill great numbers. They are prized for food and many get into the markets. The slaughter of these birds has gone on for years, but Cuba is slowly becoming conservation conscious and game laws are gradually coming to mean more and more. Closed seasons are more and more being observed, and times are growing better for the birds.

Their voice is somewhat like our Carolina Dove's but more broken into syllables, and Gundlach has well rendered it as *tuí-yu-tu-tutu*. Nesting begins in late February or early March, and lasts through the summer. As with our Doves, two white eggs are laid upon the usual perilous platform of crooked sticks.

149. **Zenaida macroura carolinensis** (Linné)

AMERICAN MOURNING DOVE

That this bird migrates to Cuba is shown by the fact that five birds banded at Key West have been shot in Cuba.

150. **Zenaida zenaida zenaida** (Bonaparte)

ZENAIDA DOVE; SANJUANERA

Why this Dove is called '*Sanjuanera*,' or what possible relation it can have with any tradition connected with St. John, I have never been able to learn, but through all western or central Cuba this is its name. As is so often the case, the name in use in Oriente is different from that of the rest of the Island and, likewise characteristically, that name is of Indian origin, being *Guanaro*. While the last of the pure-blooded Caribs died a few years ago, nevertheless there is much Indian blood evident among the peasants of Oriente; far more than is usually known to exist. Indian features, the '*typo indio*,' are common in Baire, Jiguaní, and the Sierra Maestra generally, as well as about El Caney and in the remote settlements west of El Cobre.

This wide-ranging pigeon is more shy and retiring than the *Rabiche*, and more solitary. Nevertheless it is found in varying numbers throughout the Island. Its noisy flight is often startling. It is found rarely in deep forest, though Brooks and I have taken it in the high woods about the Ciénaga. It is far more characteristic of open savanna lands and the shady second-growth *manigua* along water-courses in pastures and the outer boundaries of cultivated fields. It shuns habitations, and is seldom seen in cultivated land; in fact, it feeds but little on the ground. Its flesh is excellent.

Gundlach found nests from April to July, the usual shabby platform with two eggs, on bunches of epiphytic bromeliads or on some horizontal limb. A dove so fond of lowland solitudes, yet generally shunning the swamps, is likely to suffer from the increasing intensive cultivation unless it changes its ways.

151. *Ectopistes canadensis* (Linné)

PASSENGER PIGEON

The Passenger Pigeon, before its extinction, was a rare accidental visitant to Cuba. It never even had a native name. There are two recorded specimens, a female killed by Gundlach at Tricornia on the Bay of Havana and a male procured in the Havana market. These are both now preserved, well mounted, in the Museo Gundlach.

152. *Melopelia asiatica asiatica* (Linné)

WHITE-WINGED DOVE; PALOMA ALIBLANCA

The White-winged Dove is entirely confined to the eastern Province of Oriente. It is not an uncommon species, and usually is seen in small bands about ploughed fields and open pastures. I have had but few chances to observe the species, and have seen no specimens from the west of Holguín.

153. *Columba leucocephala* Linné

WHITE-CROWNED PIGEON; PALOMA CABEZIBLANCA

The White-crowned Pigeon is of irregular appearance in any given locality, its presence depending on the abundance of the fruits upon which it feeds. It is essentially a coastal form, and one which is always gregarious. It roosts in great hordes, usually on some mangrove islet, and bands sally forth each morn to feed, returning from their distant foragings at dusk. Then they rush and swirl into the greater resorts, or *palomares*, in incredible hosts. Famous roosts are Moraine Cay north of Grand Bahama, where I have shot, and Green Cay south of New Providence. Gundlach speaks of their seldom being seen in Cuba except when nesting, which they do at various seasons of the year. This intermittent appearance is noticed everywhere. They are in the Florida

Keys in summer only, but not every summer in equal numbers; in certain of the Bahamas they abound at one season, elsewhere at others. The fact is, the individual bands are capable of long flights and move far and wide as food supplies dictate. Great numbers are slaughtered by hunters, who build an ambush near roost or rookery and kill the returning birds as they fly in just before dark. Unfortunately this leaves many young birds to starve.

This Pigeon still appears in Cuba and the Florida Keys but in diminished numbers. On a trip from Miami to Key West and back by motor in July, 1940, I saw only a dozen or so of these birds and this though the road passes through regions where twenty years ago they fairly swarmed.

These Pigeons breed freely in captivity and in Mr. Merrick's great aviary near the Key West lighthouse there is a flourishing colony.

154. *Columba squamosa* Bonaterre

SCALY-NAPED PIGEON; TORCAZA MORADA

In western and central Cuba this beautiful Pigeon is by no means common at the present time. It is a highland bird but not exclusively confined to mountain-ranges. One finds the *Torcaza Morada* usually perched high on the dead branches of some towering tree, most often on cliffs or steepish slopes. The birds seem sluggish and make short flights, booming their heavy, sonorous call through the heat of the day. Attempt to approach, and the bird is off, for no Pigeon is more alert. Its flesh is excellent, and the body is heavy beyond other local species. In appearance in the field it is larger and darker than a domestic pigeon, and it has a patch of brilliant metallic feathers on each side of the neck. It is never terrestrial. Ramsden has given an excellent account of the persecution it suffers in Oriente, where it appears at intervals in great numbers. Ramsden also recorded breeding rookeries which Gundlach never found. This gregarious habit is beyond doubt confined to the wild Eastern Province, where the Scaly-naped Pigeon still is more abundant than elsewhere. It still occurs in the regions mentioned by Gundlach, in the mountains of Vuelta Abajo and Trinidad, but in both these highlands it may today be seen only in pairs, trios, or small bands, and probably never over a few dozen in a day—and many days far fewer would be seen. Slaughter for food and sport has already very greatly reduced this splendid species, and it now needs protection, which probably will not be granted to it, and which, if granted, cannot be enforced.

When these lines were written Pigeons of this species were to be seen every year in small numbers in the native plant reserve section of the Harvard Garden in Soledad. It is now nearly twenty years since I have seen one during my frequent visits.

155. ***Columba inornata inornata*** Vigors

PALOMA BOBA

Formerly very abundant, now to be found in only a few localities. Most of the surviving individuals are in the southern part of the Province of Camagüey. Recorded by Gundlach as seen in great numbers in the Ciénaga, about the shores of Guantánamo Bay and the Isle of Pines, but not in the interior of the Island. It is next to extinct about Guantánamo; Ramsden has, I think, but a single skin, and until a few days ago I had believed it extinct in the Ciénaga. It appears, however, that a competent friend has located a small region within the Swamp where a few birds still occur. I have received from him a single specimen, so the bird is not wholly gone. On the Isle of Pines there were a few as late as 1912, when Link secured the series upon which Todd based his local race *proxima*. Brooks and I have visited that island again and again at all times of the year, but no Pigeons were seen from 1915 to 1918. Gone it probably is today from all of Pinar del Río and from the Isle of Pines. This was inevitable. *Paloma Boba*, the Fool Dove, was unfortunately, in some localities at least, a well-deserved name. Such a stupid bird, so good to eat, never could survive.

The only Cuban specimen in the Museum of Comparative Zoölogy was an old Lafresnaye bird, with no data, until this one killed in the Ciénaga was received. In appearance and size it is like the preceding species, but it lacks the metallic patches on the neck.

156. ***Ara tricolor*** Bechstein

CUBAN MACAW; GUACAMAYO

The Cuban Macaw, a fine red and yellow species, began to disappear early. It apparently never was widespread, and I know of no tradition that it ever was found in Oriente. I was told in Guane that no Macaws were seen

in western Pinar del Río after the great hurricane of 1844. There were still a few in the Zapata Swamp until about 1850. Gundlach collected a number of birds from the last band which came regularly to feed in a small group of paraiso trees in the yard or *batey* of the *colonia* at Zarabanda. These trees are still standing, and I have talked with an aged planter who was with Gundlach when he shot his last pair. One of these, and a couple of Cuban Ivory-billed Woodpeckers, Gundlach took with him to Porto Rico when he left Cuba during the early years of the Ten Years' War. As is well known, he was in very straitened circumstances, and, being scrupulously careful in repaying favors, he gave his birds, when he returned to Cuba, to an apothecary named Blanco, who had befriended him. This Macaw is beyond doubt the one secured for the United States National Museum after the American Occupation. The Woodpeckers, I believe, are now in the American Museum of Natural History in New York. There is a second Macaw in the Museum in Washington, and one in the Museum of Comparative Zoölogy (no. 72,526), which formerly was in the Lafresnaye collection. It is in fine condition, but has one wing clipped, which suggests that it was a cage-bird secured in France. I know of but a single specimen now in Cuba. This is in the Gundlach collection in Havana. The bird formerly in the cabinet of the Havana Academy of Sciences disappeared a few years ago, and gossip has it that, having been surreptitiously extracted, it found its way to a famous private collection which was formerly in England. There was said to have been another in the excellent little Museum in Cárdenas, but this probably has been destroyed by insect pests, as also the bird formerly in the Matanzas Institute.

Gundlach described how the peasants would locate a pair nesting in a hollow palm and then wait until the young were well grown. These were caught after cutting down the palm. Thus it is probable that a good many may have found their way to Europe as pets. The adults were killed to eat, and were said to have been stupid and slow to take flight when approached.

Gundlach collected no specimens in the Isle of Pines, and the records for that island rest upon tradition only, albeit a reasonably credible one.

157. *Aratinga euops* (Wagler)

CUBAN PAROQUET; PERICO; CATEY

The Paroquet is called *Perico* in western Cuba, an abbreviation for *Periquito*, and in Oriente *Catey*. It once was abundant and widespread. Today it is dis-

appearing fast. Dr. Henry Bryant made a series of skins at Remedios in 1864. Today it is probable that the small bands which I saw in the Ciénaga in 1915 are almost the only ones west of Camagüey. The same year I found it still abundant in the forests near the south coast, not many miles west and north-west of Júcaro. These forests are probably all felled now. In 1917 I saw a small band near the Hanabanilla Falls in the mountains south of Cumanayagua, and there are still a few in the mountains near Trinidad. Birds from these mountains still visit the Soledad Gardens occasionally, especially when the fruit of the Jobo (*Spondias luteus*) is ripe. Bands are still to be met with in the Guantánamo Basin, but their numbers are everywhere diminishing. The Paroquets cannot adapt themselves to changed conditions; they are essentially birds of the virgin forest. They are stupid to a degree, and return again and again to the calls of a wounded bird. Although they easily can become inconspicuous in dense foliage by simply remaining motionless, they seldom do so for long. Overcome by curiosity, even soon after being frightened, they recommence to clamber about, stretching out their necks, and soon are to be heard chattering and squawking in a perfectly indifferent manner. Many are caught for pets; and the higher price which they are now beginning to fetch, makes the pillaging of the remaining nests all the more worth while. They nest like the Parrots in hollow trees, frequently in palms, old woodpecker borings being favored sites, the nests of the Green Woodpecker, especially, which often are drilled in the great bulky white-ant nests, seen high in so many trees.

This will be one of the next birds to become completely extinct in Cuba, as it already is in the Isle of Pines, where forty years ago it was to be found in great flocks.

158. *Amazona leucocephala leucocephala* (Linné)

CUBAN PARROT; LORO

The familiar name of *leucocephala* must be restricted to the Parrot of eastern Cuba. In the Province of Oriente Parrots are still to be found in the forests of the lower mountainsides, but everywhere they are growing fewer in numbers year by year.

159. *Amazona leucocephala palmarum* Todd

WESTERN CUBAN PARROT; COTORRA

Todd did not realize from the material at his disposal that the Parrots of western and central Cuba are indistinguishable from the Isle of Pines birds. They all average a slightly darker green, have the purplish abdominal patch generally a little darker, and the throat usually of a more intense red, than do Parrots from Oriente. A pair killed in April, 1915, at Palo Alto on the south-central coast of Camagüey, almost in the center of the island, are more like birds from the Ciénaga than like others from the eastern towns of Bayate and Holguin. Although it is probable that the living bird which Edwards figured, and which was the basis of Linné's description, came from Havana, yet there is no objection to this subdivision of the species in the absence of specific information.

For generations Parrots have been caught and shipped to Europe as cage-birds. They nest conspicuously in holes in palm trees, and the groves in which they nest are regularly divided up among the peasant collectors, who get nearly every young bird. Indeed, they often open the trees too soon and take young birds which cannot be reared, so that there is great waste. Todd has given an excellent account of parrot-catching in the Isle of Pines (*l. c.*, p. 229), and the conditions described are more or less duplicated in Cuba, wherever there are still Parrots to be caught. In 1917 and 1918, during the period of greatest expansion of cane planting, I saw great numbers of nests destroyed in clearing land. Today it is not so easy to find Parrots as it was only a few years ago. Still they persist better than do the Paroquets, although they are far from shy. There are probably bands still to be found in the more remote districts of all the Provinces except Havana. I have seen them in western Pinar del Río, about the Ciénaga de Zapata, at San Juan de los Perros, Trinidad, Júcaro and Palo Alto. There are still many bands in the Isle of Pines. They nest from late March until well into the summer. Their flesh is excellent, so good, indeed, that they sometimes are killed for food when occasionally they invade the populated districts to eat ripe cultivated fruits—a very rare happening today, to be sure. In a few years Parrots will be excessively rare in Cuba and its dependency.

Bond recognizes but a single Parrot in Cuban territory. I think, however, that the eastern and western birds are worthy of names.

160. *Crotophaga ani* Linné

ANI; JUDÍO

Whether the Spanish name of *Judío*, or Jew, is given to the Ani because of its hooked beak or because its oft-repeated cry sounds so like the word, is hard to say. Any visitor to Cuba may decide for himself, because the Jews will be the most conspicuous birds he will see in every pasture lot, even in the very suburbs. They walk about among the cattle, stand upon their backs, and hop clumsily through the underbrush. Their flight is a sort of clumsy volplaning, unlike that of all other birds except the Toucans. They abound wherever cattle are raised, over the whole island, but are not now seen in the forests or inhabited areas. They are apparently not tick-eaters as is usually assumed and, indeed, in some localities they have the name of *Garrapateros*. Cattle disturb insects, as they walk about, and for these the Jew-birds compete with one another during all hours but the heat of the middle of the day.

The large, shapeless communal nest, usually placed in a thorny lemon tree or bamboo thicket, is very rarely seen considering the abundance of Anis everywhere. They roost at night not only each band in its wonted resort but the individuals snuggling so closely one to another that every Cuban countryman will declare that they pile up into a heap, several layers sleeping one upon another.

The social nesting habits of the Smooth-billed Ani have been the subject of painstaking study by Doctor David Edward Davis. The field work was carried on at the Atkins Institution of the Arnold Arboretum of Harvard University at Soledad, near Cienfuegos, Cuba. It is by this slightly cumbersome title that what I have so often called the Soledad Garden is officially styled. Doctor Davis's studies are extremely interesting but far too lengthy to be quoted *in extenso*. The reader is referred to the 'Auk,' Vol. 57, no. 2, April, 1940, pp. 179-218. I quote, however, Doctor Davis's summary of his conclusions:

"*Crotophaga ani*, an aberrant member of the Cuculidae, lives in flocks and builds communal nests. Each colony defends a territory against strangers, which are of two types: one tries to join the group and the other does not. The defence behavior consists of 'chasing' the strange individuals and 'rushing' from tree to tree.

"The pairing and nesting behavior occurs in five distinct stages. The behavior sequence is frequently interrupted and is often irregular. The relationships between the adults are in some cases certainly monogamous, but in other cases, the relationships may be either polygynous or polyandrous.

"The nest contains the eggs from several females, each female laying between four and seven eggs. The incubation period lasts about thirteen days. The survival of the young is about 35%. The young birds remain with the flock for many months and assist in feeding the subsequent broods.

"The climatic change from a dry to a wet season permits great changes in ecological distribution, and regulates the initiation of nesting.

"The data concerning *C. ani* indicate that (1) the defence of a piece of land is the crucial factor in territorialism. (2) The breeding behavior is in some manner cyclic or at least variable. (3) The aberrant breeding habits are an offshoot of the egg-parasitism type of social parasitism."

161. *Saurothera merlini* D'Orbigny

CUBAN LIZARD CUCKOO; ARRIERO

The Cuban Lizard Cuckoo is common, widespread and rather tame, far more so than many of its allies upon other Antilles. The Isle of Pines species, *S. decolor*, has similar habits, is equally common, and is interesting because it has diverged farther from the ancestral Cuban prototype than any other bird in the island. The Cuckoos of New Providence may have been derived from Cuba long ago, and they have varied in very much the same way, in both manner and degree. The Cuban bird is tawny, but the bird from the Isle of Pines is bluish. Both resemble the Yellow-billed Cuckoo in build, but are much larger, nearly twenty inches long.

Arriero, or Muleteer, is the name generally applied throughout the island, and it is derived from the harsh, grating call—*tac-o*, several times repeated. In Oriente the call itself supplies the name of *Taco*; the Indian word *Guicaica*, also given by Gundlach, I never have heard.

Everywhere about the edges of woods, in tangles of vines and creepers, especially on hillsides, the ringing notes call one's attention to a long, clumsy bird which hops constantly upward from limb to limb, and then flutters earth-

ward again, its tail fanned out and its round, inadequate wings flapping desperately. This ceaseless hunt for lizards and locustids goes on hour after hour, save that only during the heat of noon the noisy voice is stilled.

There will always be abandoned coffee plantations and overgrown pastures and many rough limestone hills unfit for cultivation, so the *Arriero* should ever remain a common bird. *Guajiros* still believe that its flesh has valuable medicinal qualities and not only restores the appetite to convalescent invalids but possesses other virtues too intimate to be described.

162. *Coccyzus minor maynardi* Ridgway

MAYNARD'S MANGROVE CUCKOO

Since Ramsden has recorded two specimens of the Bahama Mangrove Cuckoo from near Guantánamo (*Auk*, vol. 29, 1912, p. 393), it is probable that Gundlach's few records for *C. minor* refer to the same form. He had found it once at Cárdenas, at Nuevitas and at Santiago de Cuba.

163. *Coccyzus americanus americanus* (Linné)

YELLOW-BILLED CUCKOO; PRIMAVERA

The Yellow-billed Cuckoo is a migrant which, according to Gundlach, arrives each spring and is common about the coasts, never being seen in the mountain forests. Brooks and I never have found it abundant; on the contrary, we have seen but very few altogether. That it does occasionally nest in Cuba, I have no doubt. Gundlach states definitely that, while he never has seen the eggs, "which the country people say are green," he has seen a nestling, and has killed in June a female with eggs almost ready to lay. On April 15, 1915, I shot a female near the edge of the Zapata Swamp, not far from the Hanábana River, which I thought was nest-building; unfortunately I did not wait as long as I might well have done before killing the bird. It was late, and I had a long ride home.

164. **Coccyzus erythrophthalmus** (Wilson)

BLACK-BILLED CUCKOO

For the Black-billed Cuckoo there is but one Cuban record—a single specimen killed in May near Cárdenas by Gundlach, but in what year I do not know.

165. **Glaucidium siju** (D'Orbigny)

SIJUCITO; SIJÚ PLATANERO

My large series does not bear out the contention of Ridgway and of Todd that the Isle of Pines birds are separable as a valid race. A specimen from Holguín (M.C.Z., no. 114,918) is as much spotted above as the most heavily speckled bird in my Isle of Pines series, and another (M.C.Z., no. 61,072) from the Ciénaga is equally maculate. Other specimens show various intermediate conditions, and one from the Isle of Pines (M.C.Z., no. 67,399) is in the gray phase and almost unspotted above. Bond, however, whom no one could accuse of being a 'splitter,' recognizes two names—so there you are.

These little earless Owls are quite tame and are both nocturnal and diurnal. They live, not only in woods, but about orchards and gardens. Indeed, their constancy in visiting the dark, shady recesses of banana groves has given rise to the common name of *Sijú Platanero*. They often step or move suddenly, tipping the tail up toward the back and holding it there for some little time. Gundlach says that in courtship the body is held motionless and the tail waved from side to side. They nest in hollow trees, usually in an old woodpecker hole. The call reminds one of the Screech Owl's, but is sharper, more shrill.

166. **Gymnoglaux lawrencii lawrencii** (Sclater and Salvin)

COTUNTO

The true Cuban Bare-legged Owl is, like the Cuban parrot, to be considered as confined to eastern Cuba. The western birds are identical with

the race which has been supposed to be peculiar to the Isle of Pines. The eastern Owls are decidedly more rufescent, more heavily streaked below, and have fewer and much smaller white spots on the mantle, than the birds from the western range. This species is decidedly larger than the preceding and has long legs.

It is by no means a common owl, and, in my experience—and I have shot some and seen a good many more—it is confined to limestone crevices and caves. Gundlach speaks of their sallying forth at night from caves and hollow trees, but this cannot be based on actual observation.

On entering caves in the limestone cliffs one may find an occasional pair in the dusk near the entrance. They take flight and, if the cave's mouth be high, perch upon some lofty shelf; but at times they will fly into the sunlight and perch in a dense bush, if no dark crannies are conveniently accessible, and wait until the intruder has departed. I have found them in most of the limestone sierras of the Island, but probably not over half a dozen pairs in any one year, and apparently no more common in one part of the Island than another. It is well to remember the vast number of caves in Cuba; so, after all, the aggregate population of these Owls must be considerable. Bond recognizes but one of these Rock Owls and that he would include in the genus *Otus*. Here I do not follow him. These Owls are much more like Burrowing Owls than Screech Owls.

167. *Gymnoglaux lawrencii exsul* Bangs

WESTERN CUBAN BARE-LEGGED OWL

My Owls from western Cuba agree well with birds from the Isle of Pines. I have discussed habits and distribution under the preceding heading, only failing to mention that I never have heard the note, which Gundlach describes as a prolonged *cu-co*.

168. *Speotyto cunicularia floridana* Ridgway

FLORIDA BURROWING OWL

I once had a most extraordinary experience with this bird. Landing from Allison Armour's yacht 'Utowana,' I stepped ashore not far from the south-

western tip of Grand Bahama. I saw a mound of sand on the beach, and found there the only pair of mightily shy Burrowing Owls that I ever saw. I stalked them in vain, trying to get a specimen. I made a bad shot. I consoled myself by saying that the bird was too far off; nevertheless I did make a bad shot. These two Burrowing Owls then up and flew directly out to sea in the direction of Florida. I thought that they might have swung around and come ashore again out of sight, but a long and careful search of several days duration by James C. Greenway, Jr., and myself, and which covered all of the likely burrowing owl country for a distance of many miles, finally convinced me that these birds had probably shot right across to the mainland. I know that they come and go on some of the other islands, but of course have never been able to prove whether they flew from island to island or to the mainland. That they can make long flights is confirmed by the fact that James Bond (Auk, vol. 60, Jan., 1943, p. 105) records that he has received word that Señor Gaston Villalba, the well-known Cuban ornithologist, had taken a female Florida Burrowing Owl, *Speotyto c. floridana*, at the Campo Florido, Havana, Cuba, January 7, 1934. The specimen is in the Villalba Collection. This is the first record of this bird being taken in Cuba of which I am aware.

169. *Asio stygius siguapa* (D'Orbigny)

STYGIAN OWL; SIGUAPA

Gundlach speaks of the diminution of the numbers of these Owls as a result of deforestation, and of the fact that they are killed whenever possible as being of ill omen. They are not common, to be sure, but I often have heard them, and have seen a good many flying at night. They become active usually long after dark, hence are much more often heard than seen. Their voice is an oft-repeated *who, who*, like a person calling. I agree with Gundlach that they prefer deep, dark woods; nevertheless my Aguada specimen was shot in a tree by no means dense, in an open pasture. I have seen a few others in the open pine woods of western Pinar del Río. These Owls might be successfully trapped on posts near big woodlands. This would be well worth trying, as specimens are very rare in all collections. The Owl in the field looks like an earless and very dark Short-eared Owl, only somewhat larger.

170. *Asio flammeus flammeus* (Pontoppidan)

SHORT-EARED OWL; CARABO

A very accidental visitor. When Gundlach got two from the Havana market in 1849, he recognized them as fortuitous arrivals, but years later, when the resident Porto Rican Short-eared Owl was described, he felt that perhaps his Cuban birds belonged with them. He had no material for comparison, and his first conclusion was correct. However, it is well enough known in Cuba to have a special name.

171. *Tyto alba furcata* (Temminck)

CUBAN BARN OWL; LECHUZA

This is a very polyglot amongst Owls. There is rarely a farmyard which has not near by its great umbrageous ceiba tree. Here the *Lechuzas* come by night from far and wide to hiss and creak and scold. They scour the *bateyes*, as farmyards are called in Cuba, for rats and mice, and fly low over the cane-fields on the same quest. They kill some poultry and eat small birds, but on the whole they are really beneficial to man. They are cursed whenever seen, '*Sola vayas, mal acompañada,*' and Gundlach even declares that they are accused of drinking holy oil from the sanctuary lamps of the churches. I have heard them declared to foretell death, but the belief in their thirst for oil seems to have died out. They are commonly found by day about limestone cliffs where the trees give deep shade, in open caves, in belfries and deserted houses, and not rarely under the shady crown of leaves of some high palm. Their eggs are laid on a bare shelf, or in a ruined tower, or hollow palm trunk, early, before the New Year.

In the Garden of Soledad the Barn Owls roost by day in the giant dark-foliaged specimens of the Laurel de la India (*Ficus nitida*). By night they come hurrying to a loud squeak, and some so near at times that one ducks involuntarily.

172. **Chordeiles minor gundlachii** Lawrence

QUEREQUETÉ

Abounds over the open savannas and cane-fields of Cuba from sometimes late February, but more often middle March or April, until the last of August, when it disappears. The winter range is still unknown. It rests on the burning ground in the sun and has about the habits of our Nighthawk. It flies early, often in throngs on cloudy days or after the heavy afternoon showers; at other times it appears just before dark. Its call has given rise to the excellently imitative name of *Querequeté*. In the Isle of Pines and the regions about Guane and Madruga, and in other localities where there are great semi-arid burning savannas, these Nighthawks swarm, as they do also along the railway lines which offer cinder resting places and where there are not too frequent trains.

It is similar in appearance to our Nighthawk but smaller.

173. **Chordeiles minor minor** (Forster)

NIGHTHAWK

Our Nighthawk passes Cuba on migration regularly in October and in May. On May 10, 1904, W. R. Zappey shot a typical northern bird at Santa Fe in the Isle of Pines (M.C.Z., no. 113,249). This has been commented upon by Todd (*l. c.*, p. 236).

174. **Antrostomus carolinensis** (Gmelin)

CHUCK-WILL'S-WIDOW

A common annual visitant to the more retired and overgrown pasturelands and stream-bottoms. My latest spring Chuck-will's-widow was on

May 12, 1916, near Havana. They are more often met with around the Ciénaga than elsewhere. The *guajiro* renders the call *Guabairo*, and knows that when he hears it in the spring the birds will be leaving in a few days.

175. ***Antrostomus cubanensis cubanensis*** Lawrence

GUABAIRO

This Goatsucker occurs sparingly all over the Island, but is rare everywhere. I have a breeding pair and the eggs, taken at the Playa del Chivo near Havana, and another female with eggs from near Cojímar. These, with another female from the Marianao side of Havana, all, perforce, came from more or less open country. A male which I shot February 4, 1913, was flushed in the dense, dark woods near the Ciénaga. The Bangs collection contains a beautiful female from Bayate in Oriente.

Gundlach never found the nest or eggs, and Ramsden has not taken the bird in eastern Oriente, although Guantánamo was one of the only two stations where Gundlach had collected it. There is a breeding record from ten miles south of Bayamo (C. T. Ramsden, *Auk*, vol. 29, 1912, p. 394).

The Guabairo can be identified only when in the hand. It is like a small Chuck-will's-widow, but much darker, often almost black.

176. ***Todus multicolor multicolor*** Gould

CUBAN TODY; PEDORRERA

The little green, pink-throated Todies live in a variety of situations. They are at home in the wide thickets of beach grape, whose stiff, awkward stems and great, round, hard leaves rattle in the trade-wind, and whose fallen leaves give shelter to hosts of ants, scorpions and hermit crabs. Along the arroyos, torrents in the rainy season or mere series of pools in dry weather, are rimmings of vegetation—bamboo, cocoa-plum bushes and larger trees—overarching the stream and decorated with sprays of fantastic orchids and

air-plants. Here through the green density comes the drowsy *coo* of Doves and ever and anon the Tody flashes and jerks and snaps through the air, its short, erratic flights accompanied by a sharp clicking noise like some exaggerated grasshopper. Todies are anathema to those who keep bees, but they make up for occasional sin by a confiding jollity of mien which makes them beloved by everyone. Their note is a repetition of *to-to-to*, said faster and faster until it becomes a rattling chatter. The nest is put at the end of a shallow tunnel, usually in a cut bank and only a few inches deep, and in this the three or four white eggs are laid.

Todies shift from perch to perch and do not hold to one favorite lookout like our Flycatchers. They sally forth and catch their prey in flight, then beat it vigorously on a limb before guzzling it. They are so tame that a long-handled net would often catch one if skillfully wielded.

I think there is no bird to be seen regularly in the Garden at Soledad which gives new comers to the island such a thrill when first they see it.

177. **Todus multicolor exilis** Barbour and Brooks

EASTERN CUBAN TODY

The Todies of eastern Cuba differ in color from those of the west and of the Isle of Pines, by having lighter blue on the sides of the neck and a considerably more restricted and duller yellow patch at the base of the forehead.

They occur in the same variety of situations in lowlands and on limestone hillsides that shelter the western race.

178. **Megaceryle alcyon alcyon** (Linné)

BELTED KINGFISHER; MARTÍN PESCADOR

A regular bird of passage, appearing in Cuba in varying numbers each spring and autumn.

179. **Campephilus bairdii** Cassin

CUBAN IVORY-BILL; CARPINTERO REAL

The Cuban Ivory-billed Woodpecker is virtually extinct. There may possibly be a few pairs still living in the pine-clad highlands of Mayarí, where Doctor Ramsden killed his fine pair some forty years ago and where the Swedish botanist Ekman reported having seen birds about 1920.

In Gundlach's time Ivory-bills were to be found in the Organ Mountains north of San Diego de los Baños, in the high woods about the Ensenada de Cochinos, where the memory of the *Carpintero Real* persists, as well as near Guantánamo. He collected traditions of still earlier occurrence in Banagüises, Calimete and along the Hanábana. He remarks that its voice was like a boy's tin trumpet, that it usually flew in families, and that its eggs had never been found.

A recent report that an individual has been shot within the last few years requires confirmation. This record comes from a trustworthy observer, Sr. L. R. Riva, who says he shot an adult male to pieces and could not preserve it. This was at Laguna de Piedras, near Artemisa, Province of Pinar del Río. If he had only saved the bill and a few feathers, the record would not be in doubt.

180. **Sphyrapicus varius varius** (Linné)

SAPSUCKER; CARPINTERO

The Yellow-bellied Sapsucker is the only migrant Woodpecker in Cuba. It is common all winter in the lowlands and always seems more shy than it is here with us.

181. **Xiphidiopicus percussus percussus** (Temminck)

CUBAN GREEN WOODPECKER; CARPINTERO VERDE, or TAJA

The native Green Woodpecker is really a common bird, though rather retiring and seldom approaching habitations or cultivated lands. It is a true

woodland bird, climbing about among the heavy vines and creepers which shroud so many large trees in Cuba as elsewhere in tropical America. At times it also frequents the high mangroves near the shore. Its cry is a sharp *ta há*, not unlike that of the Sapsucker. It is somewhat gregarious, and small companies of from three to five individuals are often seen in the same tree. Its nesting habits are similar to those of other woodpeckers.

The Green Woodpecker of the Isle of Pines is a good, distinct race, *insulae-pinorum* of Bangs; in this statement Bond concurs.

A resident in the Soledad Garden.

182. *Centurus superciliaris superciliaris* (Temminck)

CARPINTERO JABADO

A common, noisy bird, albeit a fine-looking one, not unlike our Red-bellied Woodpecker, but much larger and more conspicuously marked. It is really destructive, and well deserves the enmity of every planter. It digs big hollows in ripe oranges, cuts into plantains, and ruins maize ripening on the ear. It is today far more common about orchards and hedgerows than in wilder tracts, and its noisy rattle may be heard in every fruit grove. The lesser race, *murceus* Bangs, of the Isle of Pines, is only fairly well defined; it is equally common and harmful.

183. *Colaptes chrysocaulosus chrysocaulosus* Gundlach

CUBAN FLICKER; CARPINTERO ESCAPULARIO

The Flicker in Cuba is a rare bird. It loves the wide savannas and open pastures with scattered groves of guasimas and other shabby trees which struggle along on sterile lands. It is far less terrestrial than the northern bird, but nevertheless probes ant nests at times in the same familiar way. About the estuary of Juan Hernández and in the neighborhood of Aguada de Pasajeros, Brooks and I have collected perhaps a dozen birds, but elsewhere have only met with an occasional individual, a few in the pine lands of Pinar del Río and about the Ensenada de Cochinos. Gundlach says it nests in April and

May. That it may also bring out young much earlier is shown by our shooting one just able to fly but full-grown in early April, 1915.

The only near ally of this Woodpecker is the rare *C. c. gundlachi* Cory from Grand Cayman.

The Spanish name is derived from the heavy, conspicuous black patch on the breast.

184. ***Nesocoeleus fernandinae*** (Vigors)

CARPINTERO CHURROSO

A bird which is locally abundant only in the dry pastures of retired communities in southern Santa Clara and Camagüey. Gundlach says that it does not occur in Oriente. I have, however, a single example from Holguín, collected by the late O. Tollin. I never have seen a single one in Pinar del Río, Havana, nor Matanzas Provinces, although Ridgway (*Birds of North and Middle America*, vol. 6, 1914, p. 41) records examples from Havana, beyond doubt erroneously, and from San Diego de los Baños. He had only five examples altogether for examination. I have had the good fortune to collect over twenty in the overgrown pastures between Aguada de Pasajeros and Rodas, and I could have procured a fair few more about Trinidad and along the south coast of Camagüey, for I saw quite a number. This form has the appearance of a large Flicker with no black crescent on the chest, rather dingier in color but similar in habits.

185. ***Priotelus temnurus temnurus*** (Temminck)

CUBAN TROGON; TOCOLORO, or TOROLOCO

While agriculture has robbed most of the central part of the Island of its glory of forest and glade, and replaced the woods with wide reaches of green cane, rippling rhythmically in the brisk trades, still here and there bits of woodland persist. The monotony of the cane-fields is broken by the stupendous ceibas, which no one dares to cut, for "an image of the Virgin is

outlined on the bark" under each great bossed spine, and then there are the groves of stately royal palms, so useful for thatching and for feeding pigs with their fruit, *palmiche*, that no one wishes to cut them down and, indeed, it is against the law to do so. These wide fields do not attract the Trogons, whose haunts are narrowing year by year. Still, on the abrupt sierras of limestone and in the lowland thickets which grow on ground not worth the clearing, the noonday quiet is broken by the Trogon's persistent monotone, repeated over and over again. Motionless it sits, upright, for often an hour or more, and then, with tail expanded, it launches forth, poises fluttering before some cluster of fruit or insect-haunted flower, and offers for a second a sight gorgeous enough to thrill the coldest and most unkindly critic of the tropics. The call, which has been likened to the word *tocoloro*, or *toroloco*, gives the Cuban Trogon its local name.

The three or four white eggs are laid in an old woodpecker's hole, and how the parents enter and emerge from such a nesting-place without completely divesting themselves of plumage is a complete mystery. No bird is more difficult to skin, for the feathers fall, no matter how carefully handled.

The green Trogon, with its rose-pink belly, can never be mistaken for any other bird.

The Isle of Pines race, *vescus* Bangs and Zappey, is tenable but not especially well defined.

186. *Streptoprocne zonaris pallidifrons* (Hartert)

GIANT SWIFT; CUBAN COLLARED SWIFT; VENCEJO¹

A dweller, apparently, on the summits of the most inaccessible mountains. I have seen only one band in Oriente, flying over the *batey* of the San Carlos estate, Doctor Ramsden's former headquarters near Guantánamo. Here, from time to time, he gradually secured the small series from which he spared me a pair. They come hawking to the lowlands after a heavy storm, fly about for awhile, and then retire again to the hills. I know of them only in three districts of the Island: the mountains of Trinidad, the Sierra Maestra range and the northern ranges of Moa and Yateras. Nothing is known of nests or eggs. The bird is an enormous one.

¹ The Swallows and Swifts are often confused; all are often called *Golondrina*. *Vencejo*, in general use by Spaniards, is applied only to the Swifts.

I have twice witnessed visitations of these birds to the Harvard Garden. Both occurred on sultry afternoons in April at the beginning of the rains. A great emerging of some ephemerid was taking place in the Garden ponds, and for a few hours the Giant Swifts swarmed in countless numbers. They darted and swooped about our heads quite fearlessly, and it was hard to believe what we had seen, when suddenly every one disappeared. Except for these two occasions, five years apart, I have never seen a Giant Swift in the Garden. Doctor David Davis, however, had several experiences of the same sort in June and July, 1938.

The Jamaican Swifts are similar to the Cuban; those from Santo Domingo have been shown by Mr. J. L. Peters to be worthy of subspecific recognition.

187. ***Nephoecetes niger niger*** (Gmelin)

ANTILLEAN BLACK SWIFT

In habits this species is similar to the preceding, and perhaps in Cuba it is even rarer. I have it, thanks to Doctor Ramsden, from San Carlos de Guanátamo, but only from there. In 1938 Doctor David Davis observed this species in abundance at San Blas in the Trinidad Mountains in the Province of Santa Clara. This was in May.

188. ***Tachornis phoenicobia yradii*** (Lembeye)

CUBAN PALM SWIFT; GOLONDRINA; or VENCEJO

Common in savannas of Cuba and of the Isle of Pines, although the first specimens ever actually collected in the Isle of Pines were secured by Brooks at Santa Bárbara in March, 1917. The little Palm Swift is gregarious, and the colonies are scattered widely over vast areas of sterile, semi-arid grass lands in which grow scattered clumps of the various palmetto-like palms. Among the dry, pendent dead fans of these trees these Swifts stick their watch-pocket nests, usually in large colonies. They range abroad, hawking swiftly

through the whole day, never alighting to rest except among the hanging leaves of the nesting tree. As with so many birds, colonies do not occur in all of the localities which strike one as being most suitable, but nevertheless this characteristic little bird, smaller than our Chimney Swift but with similar flight, is one which every visitor may hope to observe, given reasonably good fortune.

189. *Archilochus colubris* (Linné)

RUBY-THROATED HUMMINGBIRD; ZUNZÚN¹

A not uncommon migrant. My observations agree with those of Gundlach, that it usually is seen along the northern coast and in the early spring.

190. *Calypte helenae* (Lembeye)

PÁJARO MOSCA; ZUNZUNCITO

This fairy Hummer was first found by Gundlach in a woodland near Cárdenas in 1844 and in 1848, sucking the flowers of the majagua, a tree hibiscus. Then this tract was cleared and he found none until April, 1858, when he saw them feeding on the majagua and on magueyes or aloes. They had disappeared by the end of April, and Gundlach supposed they retired to the coast cays, for there he found them in July. He observed others in September in the mountains near Guantánamo, and later found that they visited the agaves about Santiago every February. Males in full plumage he always considered very rare.

Every spring these pigmy Hummers visit the agaves near Cojímar, and many are caught with bird-lime, but apparently these are always immature examples. Neither Brooks nor I ever saw a single adult until one day we

¹ This and the following species are regularly confused and called *Zunzún* or *Zumbador*, indiscriminately. *Picaflor* and *Visitaflor* are names in use in Central America and sometimes in Cuba, but used by or learned from Mexicans or others from the mainland.

located one, singing a thin, reedy song from the dead topmost twig of a high tree near the Hacienda Jiquí on Cochinos Bay. It was no easy task to shoot and find so tiny a bird, but we succeeded, and by walking about, ever peering up at high dead twigs, we finally secured a series. The adult males in full breeding plumage evidently prefer the forest, while the others at times invade more open regions. It was not always easy to tell a Hummer from a large insect, so high were the perches which they chose. Moreover, they were singularly lethargic, often sitting, singing from time to time, for long periods at noon. At other times we did not see them.

As is well known, this is the smallest Hummingbird in the world, and one of the most brilliant. It cannot be confused with the other resident species nor with our migrant.

191. *Riccordia ricordii ricordii* (Gervais)

ZUNZÚN

An exceedingly common and very fine Hummer. One of the few birds peculiar to Cuba which the casual observer with but a few days at his disposal is sure to see. They occur wherever there are flowers, in parks, gardens and in the wild, open country. No more pugnacious bird is imaginable. They hector the little Owls and also other Hummers, and will even streak off after a Buzzard if one blunders too near their nest. The type of nest is very like that of our common Ruby-throat, and eggs may be found in any month. Many more males are seen than females, and the sexes associate but little. The story of Gundlach's famous little companion is familiar to many. She lost her nest in a hurricane, and by chance concluded to rebuild on the chandelier of Gundlach's study in Bemba. She raised four broods in this same nest, but never once was her mate seen. The same observer adds that the male does not get full plumage until the third year. The male bird is brilliant green and blue, with a conspicuously forked tail; in the field the female is easily confused with the female Ruby-throat.

The number of these Hummers at Soledad has greatly increased since the laying out of 'Arizona,' the arid area where we have gathered a great collection of succulents. Many of the species have red flowers which are especially attractive. Here a temporary shelter with red-tiled roof has been erected, so that visitors to this rather distant though very picturesque part of the garden would



AN ARTIFICIAL POND IN THE NEWER SECTION OF THE BOTANICAL GARDEN OF THE
ATKINS INSTITUTION OF THE ARNOLD ARBORETUM, SOLEDAD, SANTA CLARA, CUBA

have a refuge against the sudden showers so characteristic of tropical climes. Here one may watch the Ricord's Hummers by the hour, as males dispute with one another their right to certain favorite flowers, and the aerial gymnastics of these apparently desperate battles are always amusing to behold. I have, however, never actually seen a feather fly.

192. **Tyrannus curvirostris curvirostris** (Hermann)

GRAY KINGBIRD; PITIRRE

A Kingbird which is well named *Pitirre* from its call. Abundant everywhere, it apparently arrives in pairs which proceed to choose a nesting-site at once. It comes earlier to Oriente than to the western Provinces, according to Gundlach, and it leaves in September. Before migrating they flock, and then sometimes are shot, for the birds are considered as delicate as Reed-Birds and as fat. According to Wetmore, the Gray Kingbird does not migrate in Porto Rico.

Its habits are the usual bee-hunting, bullying, and conspicuous ways so well known in *Tyrannus tyrannus*.

193. **Tyrannus tyrannus** (Linné)

KINGBIRD

An excessively rare straggler. Gundlach gives records of a young one taken in September, 1855, and an adult in April, 1851.

194. **Tyrannus cubensis** Richmond

PITIRRE REAL

This Royal Kingbird, or *Pitirre Real*, easily distinguishable by its great size, is now rare. It is a lover of deep woods and solitudes, a bird perching on the topmost twig of some lofty forest tree, watchful after insects, lizards

and even little birds. It is not fond of the hills but haunts the lowland woods, the very places which now are changing fastest. I shot one once from a boat, as it flew over the Rio San Juan near Matanzas, and Brooks and I have killed a few about the Ciénaga. Bryant took it years ago (1864) at Remedios, where it is hardly to be looked for today, and Peters shot two at Preston in 1915. I have seen skins also from a few other localities, among them Holguín and Bayamo. It is found in the Isle of Pines, but is rare there too.

195. **Tyrannus melancholicus despotes** (Lichtenstein)

YELLOW KINGBIRD

A very rare, accidental straggler from Central America. It was first taken in 1823 by Duke Paul William of Würtemberg, at Cienfuegos, and years later by Gundlach at El Caney. Bond surmises that his Cuban records may pertain to another race, perhaps *couchii* or *chloronotus*.

196. **Tolmarchus caudifasciatus caudifasciatus** (D'Orbigny)

LOGGERHEAD FLYCATCHER

A common and conspicuous denizen of hedgerow, field and farm, showing preference for well-cleared lands. Less brave than its near allies, still it bullies and pesters little birds, and hurries off with loud cries after every *Sijú* which may appear.

It is another of the residents with which the casual visitor may readily acquaint himself.

197. **Myiarchus sagrae sagrae** (Gundlach)

BOBITO

Well named the Little Fool, for a more sluggish and more inane-appearing little bird could not be imagined. The *Bobito* has no song, but sits about all

day long, tail adroop, head pulled down and feathers fluffed, musing out the slow hot hours. Occasionally some insect flying handy by reminds it that it must eat to live, and for a second it is all vivacity; but, its prey once swallowed and its perch resumed, it lapses once more into revery.

The nest is usually in a hollow limb or bamboo stalk; and while Bobitos are very common in all retired, shady coppices, their nests are seldom seen. The bird in the field is more sluggish and smaller than our Crested Flycatcher.

198. **Myiarchus crinitus crinitus** (Linné)

GREAT CRESTED FLYCATCHER

Only twice observed by Gundlach, once under most extraordinary circumstances. After once collecting the Great Crested Flycatcher at Cojímar, he later heard the same species near La Fermina at Bemba. Indeed, the peculiar and unfamiliar call engaged Gundlach's attention for several days, then the bird disappeared. The following year, on exactly the same date, the same note was heard, but this time the bird was located and collected. Was it the same individual?

199. **Blacicus caribaeus caribaeus** (D'Orbigny)

BOBITO

What I said regarding another foolish little bird, the Myiarchus, applies equally to this Bobito. Similar habits have given it the same name, and no peasant in Cuba knows that there are two different species included. They are equally common, alike in habits and rather so in appearance, except that this one is somewhat smaller than the other, but a remarkable difference is to be seen in nidification. This Bobito creeps into no dingy hole to lay, but builds a dainty structure of vegetable wool, covered with lichens, which, except that it is larger, might easily be mistaken for the finished product of some Hummer's skill.

Birds from eastern and western Cuba are alike; those from the Isle of Pines are a very little smaller, but not recognizable as a distinct race. The

Bahaman bird represents a valid subspecies, being slightly larger and more ashy in color.

200. **Blacicus virens** (Linné)

WOOD PEWEE

Another rare straggler which Gundlach occasionally observed in October or April.

201. **Sayornis phoebe** (Latham)

PHOEBE

Gundlach once killed an immature Phoebe (February, 1846) and, not being familiar with the species at that time and not knowing that the individual was a straggler, he named it *Aulanax lembeyi*. The type of this name is in his mounted collection in Havana.

202. **Empidonax virescens** (Vieillot)

ACADIAN FLYCATCHER

A rare accidental visitor, occasionally met with in autumn or in spring.

203. **Mimus polyglottos orpheus** (Linné)

CUBAN MOCKINGBIRD; SINSONTE

Formerly, according to Gundlach, more common along the south coast than the north, today it is abundant everywhere, except in hilly country. It

is preëminently a bird of the plains, of open fields and wide savannas. In March its nesting season begins, and then the males commence their chorus of long and varied song, so gay and bubbling over with sprightly energy that they are universal Cuban favorites as cage-birds, and many are caught for export as well. In habits and nesting they are much like our familiar North American bird, and one observes no very noteworthy difference—beyond its smaller and lighter appearance and perhaps a rather softer and even more varied song.

In my large series of skins I have a few from the region of Nipe Bay which closely approach the race *elegans* of Inagua in characters which set them off sharply from other Cuban birds. One wonders whether perhaps a colony of stragglers from the southern Bahamas may not have reached this district fortuitously and by interbreeding have affected the *orpheus* stock resident there. It is worth adding here also that W. Cameron Forbes shot two Bahama Swallows from a flock at Nipe Bay, the only station outside the Archipelago where they ever have been found.

204. **Mimus gundlachii gundlachii** Cabanis

GUNDLACH'S MOCKINGBIRD; SINSONTE PRIETO

Beyond the fact that this species occurs on the cays of the northern coast, opposite Caibarién and San Juan de los Perros, I know nothing of it. It belongs to a group characteristic of dry and arid country. Its fine song makes it a favorite cage-bird in Caibarién and Remedios.

It is a large race, darker than the Cuban mainland form.

It may well be noted here, also, that Todd (*l. c.*, p. 251) has mentioned a single example of the North American Mockingbird shot on the Isle of Pines, though so far it never has been secured in Cuba.

205. **Dumetella carolinensis** (Linné)

CATBIRD; ZORZAL GATO

The Catbird arrives in Cuba in October and remains until May. It is one of the most characteristic and familiar birds about hedgerows and thickets

during its sojourn. It is found even in the heavy woods, but by and large its habits are much the same as when it is in the North.

206. *Myiadestes elizabeth elizabeth* (Lembeye)

CUBAN SOLITAIRE; RUISEÑOR

The *Ruiseñor* of the Cubans is well named, for no bird in the Americas can wear more worthily the style of 'nightingale.' Picture, if you please, a hot and misty dawn, high cliffs with tangled jungle and towering palms. The night and rain have given way to the coppery rising sun which makes each avid clamberer stop willingly to sweat and pant. Suddenly, as the sunlight strikes into a dark ravine, a long, repeated crescendo of such unearthly beauty rings out that one sinks down to rest and drink in the rising flood of antiphonal music. Far and wide, from ridge to higher peak, another bird and then another answering, ring out the limpid, flute-like notes, so serene and yet so sad.

The Cuban Solitaire is a bird of the high limestone mountains. Gundlach likens the tone of its song to the sound produced by rubbing one's wet finger along the lip of a fragile wine-glass—not a bad comparison. The males move but little when singing, and skilful natives catch a few each year by touching the songster's back with a dab of birdlime on the end of a very long wand.

They command a high price, and fare only moderately well in captivity. The song is never the same when it comes from a cage. The nest and eggs are unknown.

Contrary to Todd's conclusions, the Isle of Pines Solitaire, *M. e. retrusus* Bangs and Zappey, an excessively rare bird, is well worthy of recognition. Its slightly less olivaceous upper parts might not be noticed on a superficial inspection, but the pale ear-coverts wholly lack the tawny or buff suffusion conspicuous in true *elizabeth*, while the very pale and much less noticeable streak before the eye, so different from the richly colored stripe in the Cuban bird, serves also to separate the birds at once. Even were these color characters wholly lacking, the markedly different form of the bill suggests to me the certainly not fantastic conclusion that we may be dealing with full species and not races. Bond, who rediscovered this bird in 1920, used a trinomial to define it.

207. ***Sialia sialis sialis*** (Linné)

BLUEBIRD

Gundlach killed and mounted one Bluebird in April, 1860. This appears to have been the only record, until on February 24, 1917, W. DeWitt Miller and Ludlow Griscom saw about seven individuals, including adult males, in a suburb of Havana (Auk, vol. 37, 1920, p. 140).

208. ***Mimocichla rubripes rubripes*** (Temminck)

ZORZAL REAL

The Red-legged Blue Thrush is a common bird. It is seen everywhere in central and western Cuba, hopping about or scratching diligently in the dry leaves of garden thickets and wilder coppices. It may be found also in the woods, but it prefers a lower and more tangled growth and sunshine more easily accessible. Its song is disappointing, less varied and far less musical than that of most thrushes. A long, sharp screech is often heard; it serves as an alarm, a challenge for a fight, or as an assembly call. The flight is singularly rapid and direct, but rarely more than a few score yards.

209. ***Mimocichla schistacea*** Baird

EASTERN CUBAN THRUSH

This eastern Cuban Thrush, having a white and not a rich buff belly, is so distinct from its occidental ally that I believe it should stand as a full species. I have seen no intergrades, and in every locality in which I have collected or observed, one or the other bird was present and was of typically pure stock. Except for its being perhaps a bit more fond of the forests, this bird does not differ in customs from *M. rubripes rubripes*. Bond defines the range of this bird, and no doubt correctly, as extreme eastern Cuba.

210. ***Hylocichla ustulata swainsoni*** (Tschudi)

OLIVE-BACKED THRUSH

A rare accidental migrant.

211. ***Hylocichla minima aliciae*** (Baird)

GRAY-CHEEKED THRUSH

Another excessively rare straggler.

212. ***Hylocichla mustelina*** (Gmelin)

WOOD THRUSH

Observed on a few occasions in the beginning of October and in April. Gundlach had seen it near Havana, Cárdenas and Santiago de Cuba.

213. ***Hylocichla fuscescens fuscescens*** (Stephens)

WILSON'S THRUSH; VEERY

Gundlach gives no details regarding his record for this species beyond the fact that the identification of all his North American Thrushes had been verified by either Baird or Lawrence.

214. **Turdus migratorius migratorius** Linné

ROBIN

Known from a great flight which was recorded by Gundlach. Then, long ago, the Havana market was flooded with Robins sent in by hunters about San Cristóbal. Bruner in the Poey Society Memoirs (vol. 14, no. 2, 1914) shows that the northern Robin, as well as the southern Robin (*T. m. achrusterus* Batchelder), is occasionally to be found in Cuba.

215. **Polioptila caerulea caerulea** (Linné)

BLUE-GRAY GNATCATCHER; SINSONTILLO

The Blue-gray Gnatcatcher arrives regularly in western Cuba and becomes one of the characteristic birds of the tangles of creepers and vines in woods and of the second-growth vegetation of abandoned fields. It probably is less common today than in Gundlach's time, for while it may be seen every year it does not arrive "in abundance" now. Its habits of creeping about, often head downward, makes it an amusing creature to watch.

216. **Polioptila lembeyi** (Gundlach)

CUBAN GNATCATCHER

In Oriente, where there are plains with spiny plants or dry savannas along the coasts, this tiny Gnatcatcher may be found. It is confiding, but in my limited experience rather rare. It is one of the most distinct and local of the autochthonous birds.

Bond has found that this bird extends along the southern coast of Cuba as far west as Trinidad.

217. ***Ferminia cerverai*** Barbour

CERVERA'S WREN

Another bird which I am not sure that I have ever seen, though I once saw a small bird that I suspected to be of this species flutter away in the saw-grass near the charcoal cutting of Maximino Yebra at the head of Cochinos Bay. However, the news of my father's death reached me that same evening and I have never been back to this locality. Bond reports that it is common in its range near Santo Tomás. It is the only wren in Cuba.

218. ***Corvus leucognaphalus nasicus*** Temminck

CUBAN CROW; CAO MONTERO

The Cuban Crow grows yearly less in numbers. Once common everywhere, today its range is very circumscribed. Gundlach killed a few about Matanzas and Cárdenas as late as 1850, but for years there have been none within many miles of these towns. The forests on the south coast of Camagüey and the Trinidad hills supported a few Cuban crows as late as 1915, while there were, and doubtless are, numbers still to be seen and heard in the forest about the Ciénaga, the Ensenada de Cochinos, and along the line of the Guantánamo and Western Railways, at Bayate and elsewhere. This Crow babbles and chatters in infinite variety, like the Jamaican Crow, and in no wise like any of our continental forms—except the Raven. While they evidently are dependent upon heavy forest, and disappear as it is cut, still they do occasionally visit the plantations for fruit and grain, and to eat the *palmiche* of the royal palm. In the vicinity of wooded mountains the Crows descend at morn and eve to the lowlands, often in good-sized bands, retiring to the high land to pass the noon hours and the night.

I follow Bond in using trinominals for the Cuban Crows.

219. **Corvus palmarum minutus** Gundlach

LITTLE PINE CROW; CAO PINALERO

Gundlach apparently did not consider this Crow very rare; he knew of it in Pinar del Río, Yaguaramas and the Trinidad hills. Since his day, however, it had not been seen by naturalists until in 1915, when de la Torre and I found it again. Today it is reduced to a few small bands in the lonely arid hills with scattered pines, called Las Lomas de los Acostas, between Guane and the port of La Esperanza. Here noisy, cawing bands, shrewd and thieving, still visit the few poor little farms, always ready at the slightest sign of danger to retire to the lonely pine-clad fastnesses where they roost.

Bond records that Señor Veiga found this bird in 1924 at Jimanayagua, Camagüey.

The voice of this Crow recalls that of the Fish Crow; the other species, *Corvus l. nasicus*, cackles and croaks but does not caw. The nest and eggs are unknown. The bird may be expected sooner or later to disappear, but since the territory where it now is found has no agricultural future, the *Cao Pinalero* may persist longer than the *Cao Montero*.

220. **Vireo gundlachii** Lembeye

JUAN-CHIVÍ

Few Spanish names are more apt than that of *Juan-chiví*, for the constantly repeated song of Gundlach's Vireo has almost exactly the sound of these words. Abundant, tame and very inquisitive, this is one of the birds met with in every tract of woods and in the *manigua* (second-growth bush) as well. They creep tirelessly through the tangles of vines and creepers, *bejucales*, as such thickets are called, searching for insects, and here also these little green vireos make their pocket nests in March and April.

These West Indian Vireos tend strongly toward dichromatism, and while the present species shows this less than does *ochraceus* or *crassirostris*, nevertheless it is perfectly evident.

221. **Vireo griseus griseus** (Boddaert)

WHITE-EYED VIREO

A rare straggler.

222. **Vireo flavifrons** (Vieillot)

YELLOW-THROATED VIREO

A rare winter visitant or migrant.

223. **Vireo solitarius solitarius** (Wilson)

BLUE-HEADED VIREO

A rare winter visitant in western Cuba. Seven recent records between November 29 and April 19 (*vide* Bond).

224. **Vireo altiloquus barbatulus** (Cabanis)

BLACK-WHISKERED VIREO; BIEN-TE-VEO

The little Black-whiskered Vireos arrive each spring in Cuba, the Cayman Islands and the Bahamas, as early sometimes as the end of February, but more often in March. They leave again in late August or early September. They come from the south, but, curiously enough, the bird is not known to have been taken in Jamaica, where a closely allied form is likewise a summer resident. The English creole name of Whip-tom-kelly is a fair imitation of the

bird's song, which in Spanish appears as *Bien-te-veo*, while a Brazilian ally sounds *Jao-corta-pão* to the local ear.

A slender, grayish Vireo with a conspicuous black streak on each side of the head. It is easily identified.

225. **Vireo virescens virescens** (Linné)

RED-EYED VIREO

A rare winter resident.

226. **Bombycilla cedrorum** Vieillot

CEDARBIRD

Not unfrequently seen while on migration. I have seen them in April feeding in the trees along the Prado in Havana. Gundlach had seen a few in the autumn but more in late April or early May. His records are for Cienfuegos, Alquizar, Matanzas and Havana, and one very late record, May 22, for the Castle of San Severino near Matanzas. They frequent casuarinas and the *laurel de la India*, a gigantic figtree which produces myriads of tiny fruits.

227. **Progne cryptoleuca** Baird

CUBAN MARTIN

The Cuban Martins arrive in the cities in large numbers, and from late February to late August they swarm about their chosen belfries. Santo Domingo church tower in Havana was a great favorite before this building was

torn down. Soledad in Camagüey, the old church in the plaza at Santa Clara, the Ayuntamiento at Matanzas, the *parroquia* at Guane, the eaves of an old apothecary shop at Sumidero, are all favored haunts. It readily will be seen that these are not advantageous collecting-grounds. We got four one morning at Sumidero; they fell on the sidewalk and much uncomplimentary comment resulted. One I shot flying over woods at Palo Alto, from a few pairs that seemed to be preparing to nest in a great dead ceiba. The people are fond of the birds, and have transferred to this species the familiar legend of the Crossbill. The crosses which surmount all Latin churches are constantly preferred perches.

Cryptoleuca is very similar in flight and appearance to our Purple Martin, but in the hand the white bases of the interscapular feathers are conspicuous.

228. ***Petrochelidon lunifrons lunifrons*** (Say)

CLIFF SWALLOW

A single Cliff Swallow was killed by Ramsden at Guantánamo, November 11, 1911. It was one of a flock which were hawking about with Barn Swallows. There is no other Cuban record (see *Auk*, vol. 29, 1912, p. 396).

229. ***Petrochelidon fulva coronata*** (Lembeye)

CUBAN CAVE SWALLOW; GOLONDRINA¹

Brooks and I named the Cuban bird in 1917. Bond, although he does not recognize the race, has shown that Lembeye had given it a name in 1850.

In Cuba they arrive in late February and gather in large flocks about the caves in which they nest. Occasionally abandoned buildings are occupied, or even the recesses of a deep veranda, but caves, sometimes open but equally

¹ Swallows without exception are called *Golondrina*.

often deep and dark, are the usual breeding places chosen. A favorite spot is where the river disappears into a limestone cavern right in the town of San Antonio de los Baños. This was an impossible place to shoot, but Brooks and I found that, when we crept into the cave at night and then flashed an electric torch, the birds came in swarms clinging to our hats and clothes, as phototropic as moths. We soon had plenty, chosen by hand. A nesting place near Bolondron is in a deep, steep, almost perpendicular tubular cave-mouth, which at first looked like a haunt for bats but nothing else. The old wooden hotel at Herradura had a few nesting under the eaves, and swarms inhabit the great caverns under Morro Castle, perched at the mouth of the bottle harbor of Santiago de Cuba. The nest is of mud, mixed with grasses and feathers, and is not so enclosed as with our Cliff Swallows. These Swallows, flying mostly at dawn and eve, generally remind one in habits of Collocalias. They look like Cliff Swallows, but lack the forehead marking.

230. ***Riparia riparia riparia*** (Linné)

BANK SWALLOW

Very rare on migration.

231. ***Hirundo rustica erythrogaster*** Boddaert

BARN SWALLOW; GOLONDRINA

In late August or early September flocks of Barn Swallows pass over Cuba, staying but a few hours or a few days at most. They reappear in late April or early May. I have seen them flying back and forth over cane-fields and savannas, swarming on the telegraph wires and sometimes very plentiful about the open saw-grass of the Ciénaga, crowds one evening filling the air, and next morning not one to be seen.

232. **Iridoprocne bicolor** (Vieillot)

TREE SWALLOW

Tree Swallows pass through Cuba on the spring and autumn migrations in enormous numbers, and not a few remain through the winter. I shot several on February 6 and 8, 1913, in the Ciénaga, and had many chances to get others. W. Cameron Forbes shot one at Nipe Bay on March 8, 1914. A favorite haunt is about the sugar warehouses and factories, where for obvious reasons flies abound.

233. **Callichelidon cyaneoviridis** (Bryant)

BAHAMA SWALLOW

The first Cuban record was when Forbes, shooting at Nipe Bay, for the Museum of Comparative Zoölogy, killed two Bahama Swallows on March 8, 1914. The species was reported to be abundant at that time. It had never previously been taken outside the Bahama Islands. As I have pointed out under the Cuban Mockingbird, it looks as if there were a little Bahaman colony settled on the Cuban coast at this point.

234. **Mniotilta varia** (Linné)BLACK-AND-WHITE CREEPER¹

Common in woods and thickets. A few arrive in August, and by September they are very abundant, especially in the overgrown jungles about the Ciénaga.

¹All of the various Warblers, and sometimes other small birds as well, are called by the general term of *Bijirita*.

235. **Limnothlypis swainsonii** (Audubon)

SWAINSON'S WARBLER

Bond says that there are now three records for Cuba.

236. **Helmitheros vermivorus** (Gmelin)

WORM-EATING WARBLER

The Worm-eating Warbler is rather common, and is one of the species that visit Cuba every winter and associate during their sojourn with the native species of *Teretistris*. It climbs about vines and among the hanging dead palm leaves, in little traveling companies. It is reported very rare in Oriente.

237. **Protonotaria citrea** (Boddaert)

PROTHONOTARY WARBLER

Observed by Gundlach a few times, always in April. A very rare and irregular vagrant.

238. **Vermivora bachmani** (Audubon)

BACHMAN'S WARBLER

Gundlach writes, "During the first years of my residence in Cuba I lived on a coffee plantation near the Rio Canimar (near Matanzas), and later near Cárdenas and at various places. I have killed several pairs of this species in

majagua trees, into whose flowers they stick their bill for small insects and nectar. Since the cutting down of the *majaguales*¹ I have seen no more of the birds." Bond says that it winters in western Cuba and the Isle of Pines.

239. ***Vermivora chrysoptera*** (Linné)

GOLDEN-WINGED WARBLER

Gundlach killed only two Golden-winged Warblers—near Cárdenas in April.

240. ***Vermivora peregrina*** (Wilson)

TENNESSEE WARBLER

A few Tennessee Warblers were once observed and collected near Cojímar by Gundlach, who described both the male and the female plumage but made no further comments.

241. ***Compsothlypis americana pusilla*** (Wilson)

PARULA WARBLER

Parula Warblers visit Cuba annually, and haunt the highest woods. The series Mr. Peters obtained from woodlands near Preston in Oriente belongs to this race. As with most of the other Warblers, they come in August or early September and leave in April.

¹The termination *al* signifies 'a place of.' Thus *majagua*, a certain malvaceous tree, and *majagual*, a grove of *majagua* trees; *platano*, a banana, and *platanal*, a banana plantation; *naranjo*, an orange tree, and *naranjal*, an orange grove; etc.

242. ***Dendroica petechia gundlachi*** Baird

CUBAN MANGROVE WARBLER; CANARIO DE LOS MANGLARES

The Mangrove Canary, as the Cuban Yellow Warbler is called, is abundant wherever there are heavy high mangroves about the coast. I have found it abundant in eastern and western Cuba, and on the Isle of Pines as well. Gundlach reports it nesting in March. I incline to believe that May is more usual; and then the nest of grass, small feathers and woolly down is placed in a fork on some horizontal mangrove limb. The whole life of the species is passed in the mangrove forests. Bond records that Bruner has observed it about Lake Ariguanabo.

243. ***Dendroica tigrina*** (Gmelin)

CAPE MAY WARBLER

A few arrive from time to time during the autumn, but in February they become really common; they stay until May. They are great flower feeders and haunt aloes and the majagua tree when it is in bloom. Many may be seen about the sisal plantations near Matanzas and in gardens where agaves blossom.

244. ***Dendroica pensylvanica*** (Linné)

CHESTNUT-SIDED WARBLER

One record for Cuba, Matanzas, May 2, 1940. (Moreno, 'Mem. Soc. Poey,' vol. 14, no. 4, Dec., 1940).

245. ***Dendroica magnolia*** (Wilson)

MAGNOLIA WARBLER

An accidental vagrant.

246. ***Dendroica caerulescens caerulescens*** (Gmelin)

BLACK-THROATED BLUE WARBLER

The Black-throated Blue Warbler is exceedingly common, early to arrive and late to leave. It is one of the tamest and most confiding species, and one to be found in all sorts of situations. Early pleasant days in Cuba spent at Soledad, near Cienfuegos, brought a great surprise, for I found it not uncommon to have these little Warblers enter my room through the great ever open windows and flit from couch to chair. This happened often, notably at Guabairo, not far from Soledad. So inquisitive and confiding are they that one can hardly recognize the rather retiring dweller in woodland solitude which we know in the North.

247. ***Dendroica caerulescens cairnsi*** Coues

CAIRNS'S WARBLER

Recorded from both Cuba and Hispaniola by Bond.

248. ***Dendroica discolor*** (Vieillot)

PRAIRIE WARBLER

The Prairie Warbler is common from late August or September to April. It is found in cultivated lands and in wild and tangled thickets as well.

249. **Dendroica striata** (Forster)

BLACK-POLL WARBLER

Gundlach often collected Black-poll Warblers on their northward and southward migrations, as they passed Cuba in November and April. They are then neither common nor conspicuous.

250. **Dendroica dominica dominica** (Linné)

YELLOW-THROATED WARBLER

In spite of Scott's records of *albilora* from Jamaica my series and all the Cuban birds seem to be true *dominica*—if the races are at all separable, which is doubtful.

The Yellow-throated Warbler was the first bird which Gundlach saw after setting foot in Cuba. This was in 1839, in the park in front of Tacon Theatre, now the National Theatre. There is small chance that the experience would be repeated there today. They arrive as early as July, and by August 1st there are great crowds about; then most pass on, and later return, to go northward in early spring. I have found a few in both February and March.

251. **Dendroica cerulea** (Wilson)

CERULEAN WARBLER

Gundlach once killed a single Cerulean Warbler in April at Camarioca.

252. ***Dendroica virens virens*** (Gmelin)

BLACK-THROATED GREEN WARBLER

A rare species which I never have seen. Gundlach collected Black-throated Green Warblers several times. Bond also has taken specimens.

253. ***Dendroica virens waynei*** Bangs

WAYNE'S WARBLER

Winters in western Cuba (Bond).

254. ***Dendroica coronata*** (Linné)

MYRTLE WARBLER

Myrtle Warblers are the last of the migrant Warblers to arrive, coming in late November. They return North at the end of March.

255. ***Dendroica pityophila pityophila*** (Gundlach)

CUBAN PINE WARBLER

The Cuban Pine Warbler is found to be common, once its haunts are located. It is not found in all the growths of pine. It occurs about San Diego de los Baños, where pines are few, and much more commonly about the pine-clad hills near the mines of Matahambre and Asiento Viejo, all in western Cuba. Contrary to the experience of Gundlach, Ramsden has found it in eastern Cuba in the *pinares* of Mayarí on the north coast of the Province. It

does not leave the trees from which it takes its name, and, flitting constantly about, it frequents the highest branches.

Bond records the first finding of the nest and young birds by the accomplished Cuban ornithologist Señor Gaston Villalba. The little cup was on a pine branch about twenty feet above the ground at Bacunagua, in Pinar del Río.

256. ***Dendroica fusca*** (Müller)

BLACKBURNIAN WARBLER

Rare on migration. Bond has examined Cuban specimens.

257. ***Dendroica palmarum palmarum*** (Gmelin)

WESTERN PALM WARBLER

The commonest bird in Cuba, as it is over much of Florida, during the winter months. Its bobbing tail may be seen by every dusty roadside, along fences, in pastures, gardens, and in the very cities themselves—if there be a park with any cover. They come in September and retire late in April, the males having begun to assume the nuptial dress just as they leave. The birds seem to be such an essential part of the Cuban winter landscape that it is hard to believe that they are not natives.

258. ***Dendroica palmarum hypochrysea*** Ridgway

YELLOW PALM WARBLER

Cory recorded (*Auk*, vol. 9, 1892, p. 273) both races of the Palm Warbler in a list of birds "actually taken" during a visit he made to Gundlach in the previous winter. It is not improbable that this race may occur occasionally among the vast numbers of *palmarum* that throng the island every winter.

259. **Oporornis formosus** (Wilson)

KENTUCKY WARBLER

The Kentucky Warbler is a rare accidental visitor. Gundlach found one dead on the roof of a house in Havana in August. It had flown against a white wall. Later he killed another in April at Cojímar.

260. **Seiurus aurocapillus** (Linné)

OVEN-BIRD

Oven-birds are common all winter. They arrive in late August and early September and stay until April. They are common in woods, in orchards, about thickets and, especially in Oriente, in coffee plantations, in which they walk about with the mincing gait of a tiny Zorzal, scratching the leaves and peering under chunks and stones for spiders and beetles.

261. **Seiurus motacilla** (Vieillot)

LOUISIANA WATER-THRUSH

The Louisiana Water-thrush has been recorded from the mountain streams of the Oriental Province. I have one from Holguín, September 2, 1904.

262. **Seiurus noveboracensis noveboracensis** (Gmelin)

NORTHERN WATER-THRUSH

A not uncommon winter visitor. Found about lakes, ditches and river-banks, and in the mangroves along the seashore. Todd refers several birds,

shot by Link in the Isle of Pines, to the race *notabilis*. The specimen before me, shot by Mr. Peters at Nipe Bay, March 1, 1915, is true *noveboracensis*, and supports Cooke's surmise, quoted by Todd, that the West Indian records "unquestionably relate to the eastern bird." Bond records both races as wintering in the Greater Antilles.

263. **Teretistris fernandinae** (Lembeye)

BIJIRITA

Mingling all winter in bands with many migrant Warblers, the two little *Bijiritas* peculiar to Cuba are common in woodlands and about old, overgrown fields. Unlike the migrants, however, they like retired haunts, and do not hop about the houses, much less enter them—as some of their northern allies do. The two distinct species of *Teretistris* never have been observed to intergrade, and though the exact limits of their ranges are unknown, it is probable that the following form inhabits Oriente only, and this species the remainder of the island. In summer they are much more retiring and solitary. They nest from late March to May, sometimes with a small, round nest placed on a horizontal branch, but more often in the pendant Spanish moss called *guajaca*, a *Tillandsia*.

A little gray warbler, with olive-green back, yellow head and gray belly. The sexes are alike in plumage.

264. **Teretistris fornsi** Gundlach

ORIENTE WARBLER

Similar in all respects, as to haunts and habits, to the preceding species, but much more circumscribed in distribution, being found only in eastern Cuba, Camagüey and Oriente, according to Bond.

A very distinct species this, which differs from the other in having the top of the head gray, not yellowish, and in having the yellow of the throat extended over the belly.

265. ***Geothlypis trichas brachidactyla*** (Swainson)

NORTHERN YELLOW-THROAT; BIJIRITA

Another common winter resident. Found about marshes, in canebrakes and reed-beds, and in lowland thickets of vines and lianas.

266. ***Wilsonia citrina*** (Boddaert)

HOODED WARBLER

Gundlach occasionally got a Hooded Warbler, always near water and near the ground. They are very rare, and his records are few: one in a garden in Havana, a few pairs in the mangroves near Cárdenas and one on the bank of a stream in the Sabana de Guamacaro. All were killed in April while passing northward.

267. ***Setophaga ruticilla*** (Linné)

REDSTART; CANDELITA

The Redstarts are the first sign to Cubans that the migration is on, and they probably are the very last northern visitors to leave in the spring. They are exceedingly abundant in thickets and woods everywhere, even in the outskirts of the cities. Except for the Palm Warbler, no bird is more in evidence during the winter than the Candelita—the little flame. The North American observer never would dream that there could be enough Redstarts gathered together from all the bird's range to make up the hordes which come to Cuba.

268. **Cyanerpes cyaneus carneipes** (Sclater)

BLUE-HEADED HONEY CREEPER; AZULITO

The Blue Honey Creepers are very local. Ramsden showed them to me near Guantánamo in early March, 1915, feeding on the flowers of the cupey (*Clusea rosea*), a parasitic tree which towers far above its host. It also feeds in the majagua blossoms, but though this tree is widespread, the bird is very local. Their erratic appearance accounts for the name of *Aparecido de San Diego*, but *Azulito* is more generally used. Many are caught with bird-lime, and for a short while each spring scores are for sale in Santiago and Havana, but in no such number, however, as one may see in May in the market at Panama. Bangs has described the Cuban birds as a local race, *ramsdeni*; yet, loath as I am to part with this friendly name, I must conclude that the Cuban birds are not separable from those of Panama and Nicaragua. If the bird was introduced into Cuba purposefully, this must have been done years ago, for it was well known during all Gundlach's sojourn. He found his first nest in 1844; then it was widespread. Today it certainly is rare, except in Oriente, where I have seen it near San Carlos de Guantánamo and near El Cobre. I have heard of it in San Carlos de Luis Lazo and San Diego de los Baños.

This little bird has a sky-blue crown, black body and yellow inner webs to the primaries; the female is dull green.

269. **Holoquiscalus niger caribaeus** Todd

CUBAN WEDGE-TAIL; CHINCHIGUACO

This race occurs not only in western Cuba but in the Isle of Pines. The Wedge-tail Grackles of Cuba have been in some confusion, which happily has been satisfactorily cleared up by Mr. Peters in his excellent review of the difficult genus (*Auk*, vol. 38, 1921, pp. 435-453).

The *Chinchiguacos* flock with the *Totís*, and their habits and haunts are similar. These Blackbirds, however, sing in unison like the Red-wings, and in winter assemble in very large bands. They visit bamboo groves or mango thickets near water and often bathe together and afterward sing in chorus—and very agreeably. The flight is rather slow and labored, as if the great, deep tail were too heavy for comfort. It serves the males well in springtime, when their antics during courtship are most bizarre. In one display the head is turned back until it rests between the shoulders, while the tail is fanned.

270. **Holoquiscalus niger gundlachii** (Cassin)

HACHUELA

Todd restricted this name to the bird of eastern Cuba. It is quite similar in habits to *caribaeus*. It is even larger and more handsomely colored. Bond believes that the birds of central Cuba belong to this race.

271. **Ptiloxena atrovioleacea** (D'Orbigny)

CUBAN GRACKLE; TOTÍ; CHONCHOLÍ

This Grackle flocks in company with the Wedge-tails, and is excessively abundant and conspicuous during the winter season. In spring the gatherings break up, and the birds pair for nesting. They search thatched roofs for roaches, and cattle's backs for ticks, and haunt the high groves of royal palms for the insects attracted to the flowers, and the beetles which harbor in the great clusters of fruit. The two-syllable call-note is not unpleasant and has given rise to the native name *Totí*. They do not sing in chorus like the Red-wings.

In the field this bird looks like a rather small, short-tailed Purple Grackle; it is, however, strictly arboreal.

272. ***Icterus dominicensis melanopsis*** (Wagler)

CUBAN ORIOLE; SOLIBIO

The Cuban Oriole is gorgeous and common. It usually is seen in small companies of adult and immature birds, stabbing into the bases of the flowers.

Wire fences are now widely used, and the problem is to find posts which the white ants will not eat. Two plants furnish these, the smooth, red almácigo and the piñon. Both soon take root and grow into trees, so that tall hedgerows take the places of what were once simple fences. The piñon (*Erythrina*) flowers profusely, and the Orioles may be seen laboriously drilling each tubular flower through at the base, in search of little insects and sweet liquor as well. They frequent the majagua, when in flower, and other allied species of hibiscus, as well as orange and lemon trees. They are fond, too, of soft, ripe fruit, into which the bill may easily be thrust, the favorites being the sweet and sour sops, the anon and guanábana.

The nest, suspended from a palm frond or banana leaf, is the usual beautifully woven pouch. Both male and female take part in drilling the holes from which are woven the suspending threads, shredded out from a dry, dead palm leaf.

The adult birds of both sexes are uniform black, the wing-coverts, lower back and thighs brilliant yellow. Immature birds are more or less dusky olive-green.

273. ***Icterus cucullatus*** Swainson, subsp.

HOODED ORIOLE

Gundlach reported it as having twice been seen, once in 1856 and again in April, 1859. There is a specimen mounted in the Gundlach collection in Havana.

274. ***Icterus galbula*** (Linné)

BALTIMORE ORIOLE

Never seen in autumn, but occasional individuals have appeared from time to time, both adults and birds in immature plumage, usually in April and in company with native Orioles or with migrant Tanagers.

275. ***Icterus spurius spurius*** (Linné)

ORCHARD ORIOLE

The Orchard Oriole appears occasionally in spring in company with Baltimore Orioles or alone. It seems possible that they are regular migrants, and have been overlooked among the native Orioles in immature dress.

276. ***Agelaius humeralis humeralis*** (Vigors)

CUBAN RED-WING; MAYITO

The *Mayitos* abound in winter in great tame swarms, and haunt door-yards and gardens whispering and wheezing metallicly, and the volume of sound is very great. In the spring the males seek mates, and the pairs split off and nest in April and May. They build, on palm fronds or on clumps of air-plants, a nest of grass and Spanish moss lined with hair and vegetable wool.

Formerly they did great damage in the rice-fields, but today, beyond raising an unconscionable racket, they are very pleasing and ornamental neighbors.

This is the black bird with a tawny shoulder-marking and with the female black also, but still having a shoulder-patch, though less extended and often much invaded with black feathers.

277. **Agelaius phoeniceus assimilis** Lembeye

CUBAN SWAMP RED-WING; MAYITO DE LA CIÉNAGA

Until Brooks and I rediscovered this species in the Ciénaga de Zapata, not far from the Laguna de Punta Gorda or where the Rio Hanábana enters the Swamp, this Swamp Red-wing was known only from the small series which Gundlach collected. We observed one once in the swamp near Cárdenas in 1917, and a very few evidently remained there where Gundlach found it abundant in 1842 and 1844. One great band, seen by us day after day in the late afternoon, frequented a small group of trees near the open Ciénaga. Here they came from the far horizon to roost, perhaps the whole species population together. Singing in chorus, they could be heard at a great distance. I found the flock at the same spot three different years, and the last time I watched it diminish day by day in April, as the males, assuming fresh breeding plumage, mated and moved off, to build in the high rushes. Here the scattered pairs pass the summer. Bruner and Bond have both recorded that this bird is to be found also at the Laguna de Jorero, south of Guane in western Pinar del Río.

This bird looks like our familiar Red-wing, only it is smaller, and the female is uniformly coal-black.

The birds from the Ciénaga of the Isle of Pines, which Bangs has separated as a race, *subniger*, do not differ from the Cuban birds in color characters as we first supposed, but the race is, nevertheless, and in spite of Todd's statements, perfectly valid. The Isle of Pines birds all have a rounded, and the Cuban birds a flattened, culmen.

278. **Xanthocephalus xanthocephalus** (Bonaparte)

YELLOW-HEADED BLACKBIRD

There are two instances of the occurrence of the Yellow-headed Blackbird, Gundlach's specimen, now in his cabinet, which came from the Havana market, and Ramsden's record for Guantánamo (*Auk*, vol. 29, 1912, p. 103).

279. ***Sturnella magna hippocrepis*** (Wagler)

CUBAN MEADOWLARK; SABANERO

The Cuban Meadowlark is more common and tamer than our own, and in the field is very similar in appearance. It is to be seen everywhere in the drier and more open portions of the Island. It does not, of course, frequent cane-fields, but pastures and savanna lands swarm with these very musical and engaging larks. Their nest is similar to that of the northern species. The call is a more prolonged whistle, and is less broken into several notes than with our birds.

As Todd has shown, *hippocrepis* is surely most closely related to *argutula* of Florida.

280. ***Dolichonyx oryzivorus*** (Linné)

BOBOLINK; CHAMBERGO

Gundlach said that the Bobolink passed through Cuba in great numbers in October and again in May. Formerly, when rice was cultivated in the Island, these birds did much damage and spent some time in the rice-fields, to the disgust of the planters. Now this does not occur, and the reduced numbers which migrate through the Island do not tarry long and find but little to attract them in the open pastures and marshes. The *Chambergos* are well known to be delicious, as with us.

281. ***Spindalis zena pretrei*** (Lesson)

CABRERO

I never have found the Cuban *Spindalis* a common bird, although Gundlach says it was rather abundant in his time. It frequents overgrown hillsides

and rather wild tangles in old pastures, and the edges of big woods. One always finds it in pairs, and one is always surprised that it shows no fear of man. It is persistently trapped—or rather was—and still is a favorite cage-bird sought after for the aviaries so many Latin-Americans maintain among the shrubs and palms which decorate and shade the patio. There is usually a pair or two to be seen about the Garden at Soledad.

This fruit-eating tanager is easily recognized by the black head, with conspicuous white stripes over the eye and along the side of the head, and the rufous-orange collar, rump and chest; the back is olive-green. The female is almost uniform plain olive.

282. ***Piranga rubra rubra*** (Linné)

SUMMER TANAGER

Seen in small numbers in spring and autumn as they pass over Cuba on migration. I have observed the bird but two or three times.

283. ***Piranga olivacea*** (Gmelin)

SCARLET TANAGER

Neither this species nor the Summer Tanager is known to the natives at all. The Scarlets are sometimes seen in company with the other species, and are always rather more abundant. Both birds pass through Cuba at the same times, usually in September and April. I have seen them only in spring.

284. ***Chondestes grammacus grammacus*** (Say)

LARK SPARROW

The Lark Sparrow has been taken once at Guantánamo, in 1911, by Doctor Ramsden (*Auk*, vol. 29, 1912, p. 395).

285. ***Passerculus sandwichensis labradorius*** (Howe)

LABRADOR SAVANNAH SPARROW

One Cuban record.

286. ***Passerculus sandwichensis savanna*** (Wilson)

SAVANNAH SPARROW

The Savannah Sparrow is rare. A few individuals may occasionally be seen during the winter in open pastures or savannas, usually singly.

287. ***Ammodramus savannarum pratensis*** (Vieillot)

YELLOW-WINGED SPARROW

The Grasshopper, or Yellow-winged, Sparrow spends the winter in Cuba, and I strongly suspect that some individuals are resident. My examples from eastern and western Cuba, however, cannot be separated from this race. The local name of *Chamberguito*, the diminutive form of the name used for the Bobolink, while in use in Gundlach's time, is never heard now.

288. ***Spizella passerina passerina*** (Bechstein)

CHIPPING SPARROW

There is only one record for the Chipping Sparrow, a female which Gundlach shot on a fresh-water marsh near the sea, probably north of La Fermina, where he labored so fruitfully and for so many years.

289. **Torreornis inexpectata** Barbour and Peters

ZAPATA FINCH

Another of the extraordinary discoveries which Cervera made while in my employ. Bond says: "It is remarkably fearless and seems loth to take to wing although its flight is strong for a bird with such disproportionately short wings.

"During the winter months the Zapata Finch may be located in scattered groups, searching for food in the swamp grass or in the low bushes in the more open parts of the swamps, the birds being most active in the early morning and in the evening. Its song is unknown, the only note that I have recorded being a drawn out 'tseep,' similar to that of numerous other birds of the region."

Known only from the immediate vicinity of the Santo Tomás area in the Zapata Swamp.

290. **Zonotrichia leucophrys leucophrys** (J. R. Forster)

WHITE-CROWNED SPARROW

Bond has examined a number of Cuban specimens.

291. **Tiaris olivacea olivacea** (Linné)

COMMON GRASSQUIT; TOMEGUÍN DE LA TIERRA

The little Common Grassquit is very common everywhere. Jaunty, confiding and with a chirping, insect-like call, little bands may be seen in every dry hedgerow and thicket all the year through. For while they nest during every month of the year, and Brooks and I have found fully fledged young in January, February and March, still the birds which are not paired

for immediate nesting are banded into the little itinerant companies that never fail to thrill the newcomer to *el campo de Cuba*.

These little Grassquits are small, olive-gray, sparrow-like ground Finches with very short tails and with a black mask and cheek and a yellow spot on the throat.

292. **Tiaris canora** (Gmelin)

MELODIOUS GRASSQUIT; TOMEGUÍN DEL PINAR

This lovely little finch is more common in western Cuba than elsewhere. I have specimens from Luis Lazo and Holguín, and from Lake Ariguanabo and Guaro on Nipe Bay. It is far less abundant than the other Grassquit, but often is seen associated with it in flocks, as well as banding by itself. The two species are similar in habits, make ideal cage pets and, be the aviary large, both will breed in captivity.

It is easily distinguished from the Common Grassquit by having much yellow on the sides of the neck, indeed tufts of long feathers, and a yellow stripe behind the eye.

293. **Melopyrrha nigra nigra** (Linné)

CUBAN BLACK FINCH; NEGRITO

A rather common and quite active and engaging little tramp, fond of the dusty tangles and thickets in dry pastures and arid fields. Gundlach speaks of their moving about in small companies, and often in company with other birds, but this is the very reverse of my experience. The Negrito sings nicely and thrives in captivity, and while perhaps as abundant today as ever it was, still it is now certainly inclined to be rather shy and solitary. I suspect that it has been trapped rather too extensively of recent years.

An unmistakable little Finch, deep black with white axillars, under wing-coverts and inner webs of primaries and secondaries, which are very conspicuous in flight.

294. ***Passerina cyanea*** (Linné)

INDIGO-BIRD; AZULEJO

Another bird of spring and autumn passage, and one which some years must be rather abundant and may make a stay of some duration. A very considerable number are often on sale in the bird stores, and they are great favorites as cage-birds and apparently thrive.

295. ***Passerina ciris ciris*** (Linné)

NONPAREIL; MARIPOSA

A few Painted Buntings winter in Cuba, but in my experience they are very few and, as Gundlach says, very shy.

296. ***Guiraca caerulea caerulea*** (Linné)

BLUE GROSBEAK

Gundlach remarked that the Blue Grosbeak appears occasionally in April along with the migrating tanagers, but that it is excessively rare. Bond records Bruner as finding an occasional winter resident. I have never seen one.

297. ***Hedymeles ludoviciana*** (Linné)

ROSE-BREASTED GROSBEAK

Seen for a few days each year in October and April during the rush periods of migration, when, twice each year, the avifauna of Cuba offers one of the most remarkable medleys of northern and tropical types which can be seen anywhere in the world.



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PLATES

Frontispiece. A tangled corner on the Soledad Garden.

Facing page 92. Pond in Soledad Garden.



